What is the role of parent focused interventions in promoting language development and how much change can we expect?

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TAALSTAAL Conference, Utrecht - 10.11.17

Brief outline

- The parents role in language development
- What speech and language therapists currently do regarding working with/ training parents to improve their children's language skills
- Intervention reviews
  - Parent/child book reading
  - Parent/child interaction therapy
- Some thoughts about mechanisms
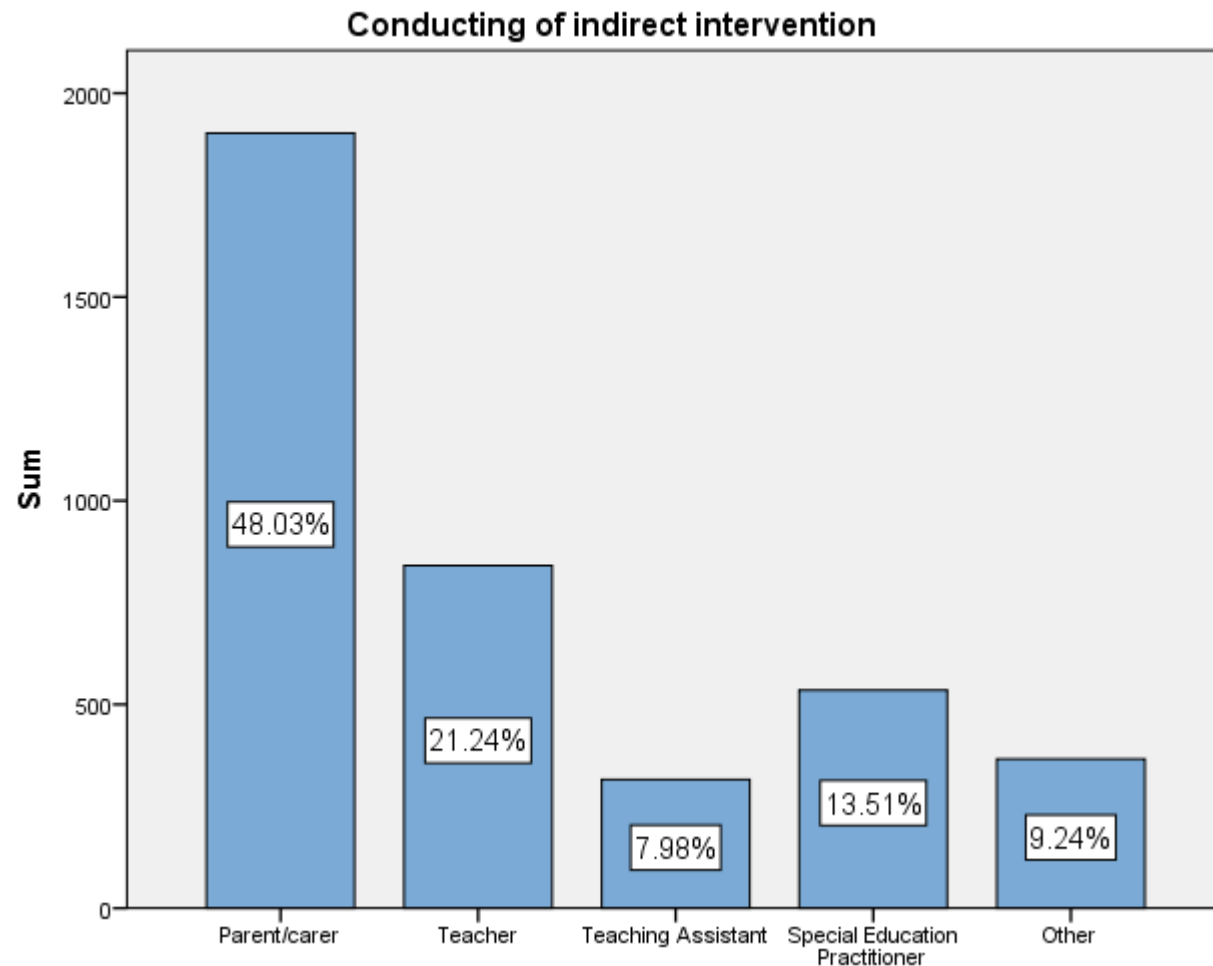- Next steps

The role of parents

- Two, not necessarily opposing, positions
  - Parental role in language development essentially trivial (Chomsky)
  - Parents are not "instructors of language" (Pinker)

But
  - Children's experiences clearly shape **how** they communicate and, of course, the languages they learn
  - Input effects are likely to be stronger earlier on but specific links between **how** parents speak [motherese/caregiver speech etc] and children's early utterances have been difficulty to demonstrate
  - Quantity and quality of linguistic input provided by parents impacts child language development (Hart & Risley, 1995; Smith, Landry, & Swank, 2000; Tamis-LeMonda, Bornstein, & Baumwell, 2001;)

- The question is less whether input has a direct effect than whether it is possible to enhance language performance through parent/child interaction interventions and, where children find the language learning difficult, can specific parental instruction enhance the process

COST ACTION 2017 Practitioner Survey (n-5027)
If the intervention is delivered indirectly <u>who</u> works with the child?

Conducting of indirect intervention

- Parent/carer: 48.03%
- Teacher: 21.24%
- Teaching Assistant: 7.98%
- Special Education Practitioner: 13.51%
- Other: 9.24%

For this child, please indicate whether you have used or are using the following strategies or approaches in your intervention.
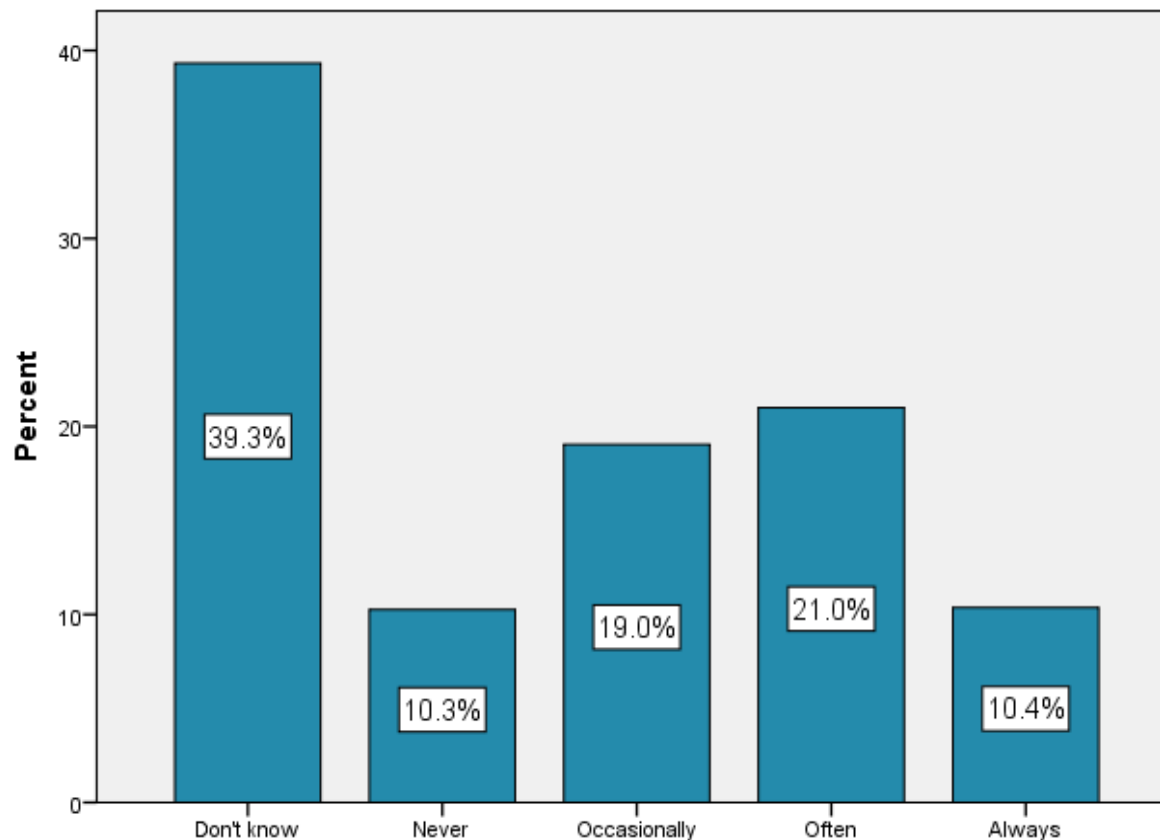

Training of parent-child interaction
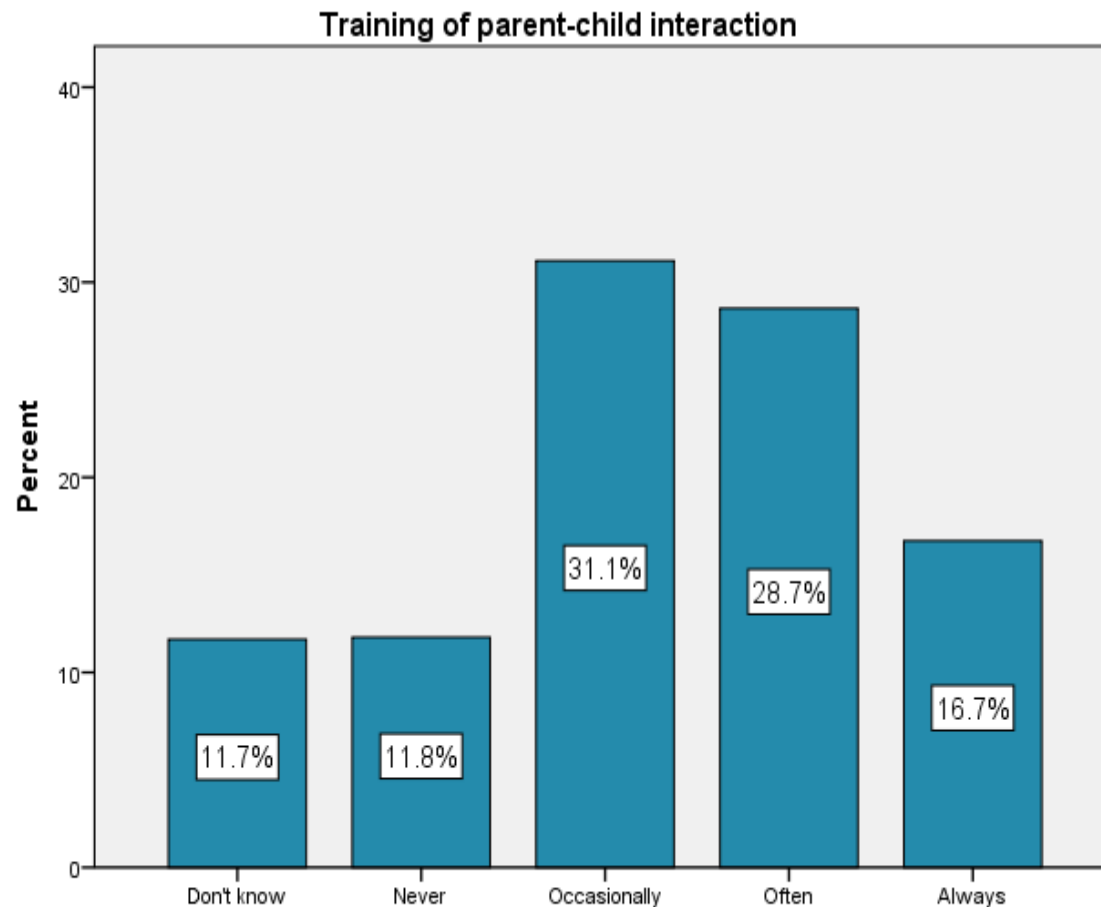
For a given child, please indicate whether you have used or are using the following strategies or approaches in your intervention.

Milieu teaching approaches

Review #1
Parent/child book reading

Nuffield Foundation

Newcastle University

Parent-child reading to improve school readiness and language development at school entry:

A systematic review

James Law,
Jenna Charlton,
Robert Rush,
Cristina McKean,
Fiona Beyer,
Cristina Fernandez-Garcia

October 2017

Parent child book reading is one of the best evaluated of interventions that bring parent and child together in a common activity

Takes various forms, sometimes with structured prompts but many (but not all) focusing on the child's language development as an outcome

In this review we focus specifically on the expressive and receptive language outcomes plus school readiness.

- Nine existing reviews over the past twenty years with varying combinations of interventions, designs, contexts, outcomes and ages included

- We were interested in expressive, receptive language skills and pre-literacy in the preschool period, with interventions carried out in the home by the parent following training

- And comparisons with no intervention or "intervention as usual" (ie NOT other interventions)

Inclusions and exclusions

- **Included:**
- Children up to five years
- Any language or culture
- Parent/child booking reading interventions primarily focused on the home (although the training might be centre based)
- RCT and quasi-experimental studies

- **Excluded:**
- Cohort studies.
- Before and after studies.
- Experimental single subject designs.
- Narrative/descriptive studies
- Quasi-experimental studies that report only post-intervention data, where the equivalence of groups pre-intervention cannot be determined.

Outcomes

- Expressive
  - Vocabulary
  - Standardised composite language measure
  - Other language measures (ie new words)
- Receptive
  - Vocabulary
  - Standardised composite language measure
- Pre-literacy measures

How were studies analysed?

- Two reviewers independently extracted data onto a data extraction sheet in Excel designed specifically for the review. The data extraction sheet captured the following:

- Participant characteristics (age, gender, ethnicity, nationality, disabilities),

- Intervention style (dialogic, book gifting, shared reading etc), delivery (individual, group, video) and other features (e.g. number of books gifted, length of training)

- Intensity and duration of intervention (number of weeks, days per week, hours)

- Type of outcome measure (teacher observation checklist, standardised tests, criterion referenced measures)

- Studies using comparable interventions and reporting the same outcomes were pooled using standard pair-wise meta-analysis, using a random effects model in Stata (StataCorp 2013) to produce the associated forest plots, funnel plots, and resultant meta-regression.

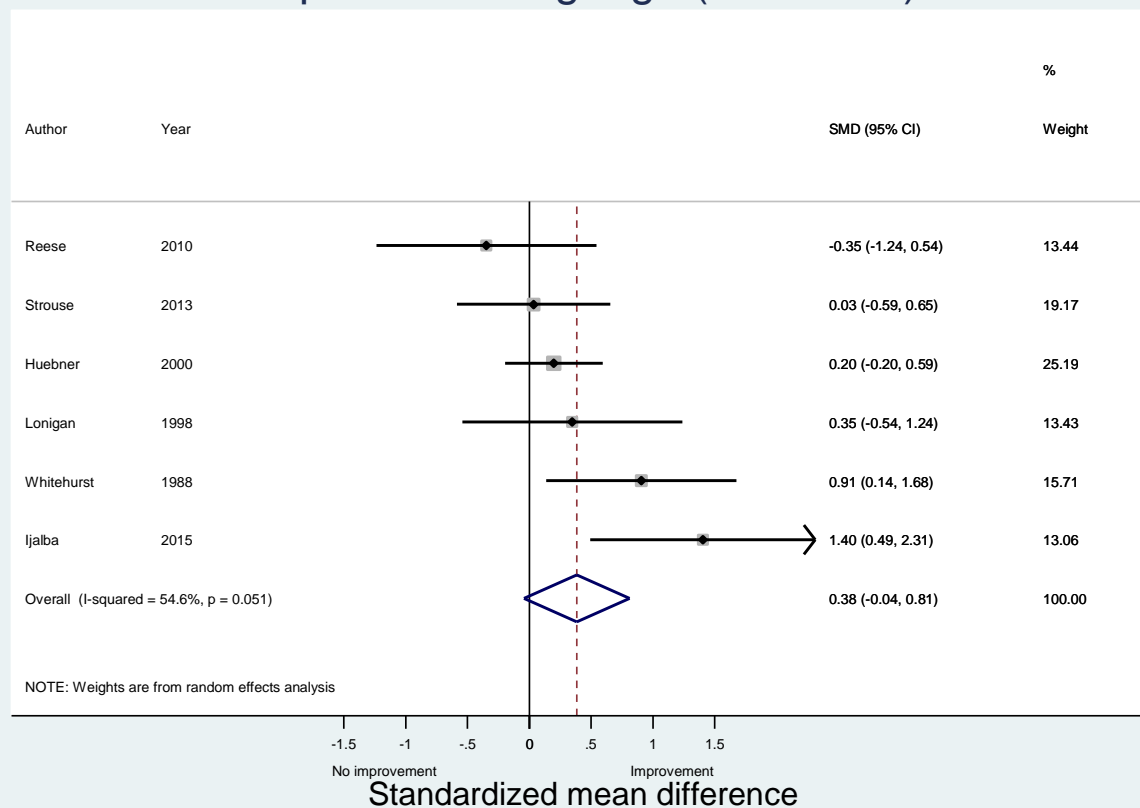# Subgroup analyses

- age(categorised into <2 years, 2 years, 3-4 years)
- more or less socially disadvantaged populations
- type of intervention (dialogic vs shared),
- frequency of intervention sessions (categorised evenly into 5-week blocks which reflect commonly used intervention durations),
- type of parent training (group or individual), and the type of study (RCT vs quasi-experimental).

Results

- 59 were selected for full text screening, and 22 were included in the review (16 in the meta-analyses).

- Altogether, the review reported on 751 children receiving intervention, and 569 control group children, and were conducted across 5 countries.

- NB most of the studies were from the US. None were from the UK.

Expressive vocabulary

Expressive Language (EOWPVT)

Author	Year	SMD (95% CI)	% Weight
Reese	2010	-0.35 (-1.24, 0.54)	13.44
Strouse	2013	0.03 (-0.59, 0.65)	19.17
Huebner	2000	0.20 (-0.20, 0.59)	25.19
Lonigan	1998	0.35 (-0.54, 1.24)	13.43
Whitehurst	1988	0.91 (0.14, 1.68)	15.71
Ijalba	2015	1.40 (0.49, 2.31)	13.06
Overall (I-squared = 54.6%, p = 0.051)		0.38 (-0.04, 0.81)	100.00

NOTE: Weights are from random effects analysis

-1.5 -1 -.5 0 .5 1 1.5

No improvement   Improvement

Standardized mean difference

HOW MUCH DOES PARENT/CHILD READING INCREASE THE NUMBER OF WORDS A CHILD USES?

REECE -0.35
STROUSE 0.03
HUEBNER 0.20
LONIGAN 0.35
WHITEHURST 0.91
IJALBA 1.40
OVERALL 0.38

Receptive vocabulary

Receptive Language (PPVT)

Author	Year	SMD (95% CI)	% Weight
Lonigan	1998	0.09 (-0.79, 0.97)	7.88
Huebner	2000	0.27 (-0.13, 0.66)	20.84
Whitehurst	1988	0.56 (-0.18, 1.31)	10.14
Kotaman	2013	0.73 (0.09, 1.37)	12.41
Aram	2013	0.79 (0.25, 1.33)	15.47
Vally	2015	0.97 (0.51, 1.43)	18.16
Korat	2013	1.13 (0.58, 1.68)	15.10
Overall (I-squared = 41.4%, p = 0.115)		0.68 (0.40, 0.96)	100.00

NOTE: Weights are from random effects analysis

-1.5 -1 -.5 0 .5 1 1.5

No improvement   Improvement

Standardized mean difference
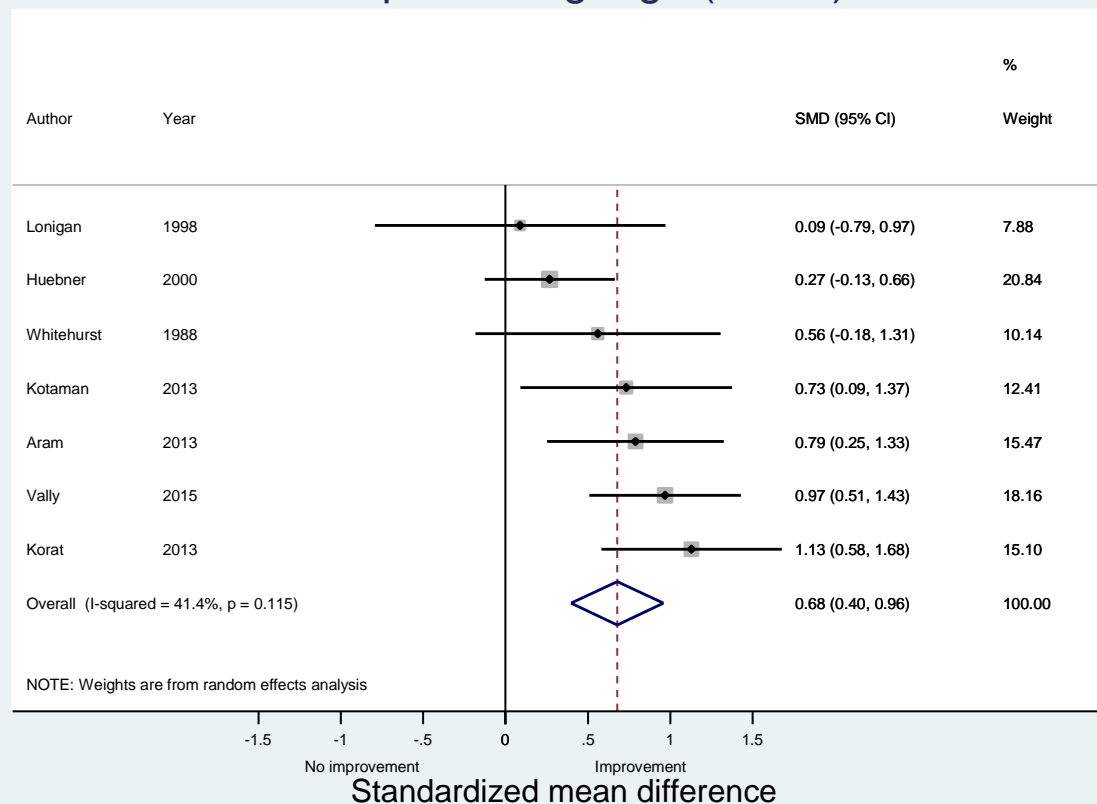
HOW MUCH DOES PARENT/CHILD READING
IMPROVE A CHILD'S UNDERSTANDING OF WORDS?

LONGAN 0.09
HUEBNER 0.27
WHITEHURST 0.56
KOTAMAN 0.73
ARAM 0.79
VALLY 0.97
KORAT 1.13
OVERALL 0.68
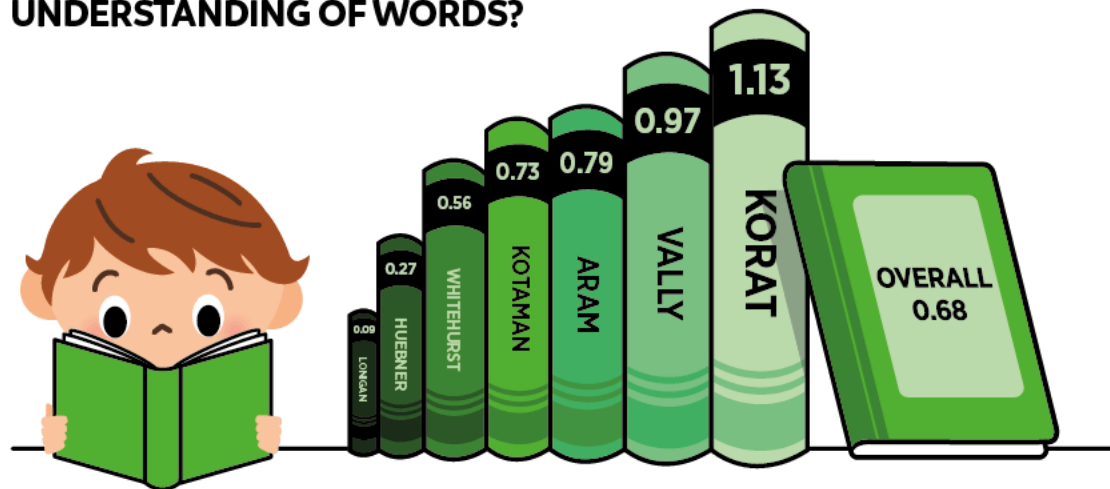
Pre-reading

Pre-reading Outcomes
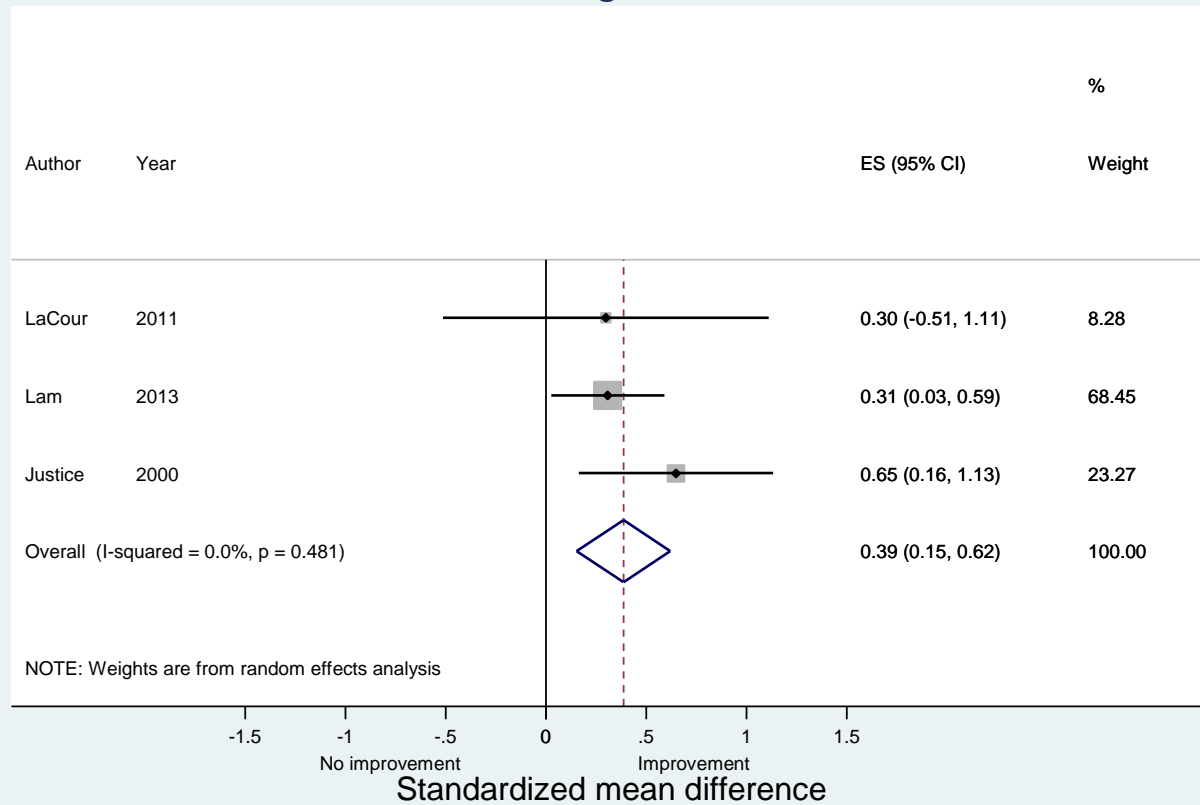
HOW MUCH DOES PARENT/CHILD READING IMPROVE A CHILD'S PRE-READING SKILLS?

LACOUR 0.30
LAM 0.31
JUSTICE 0.65
OVERALL 0.39
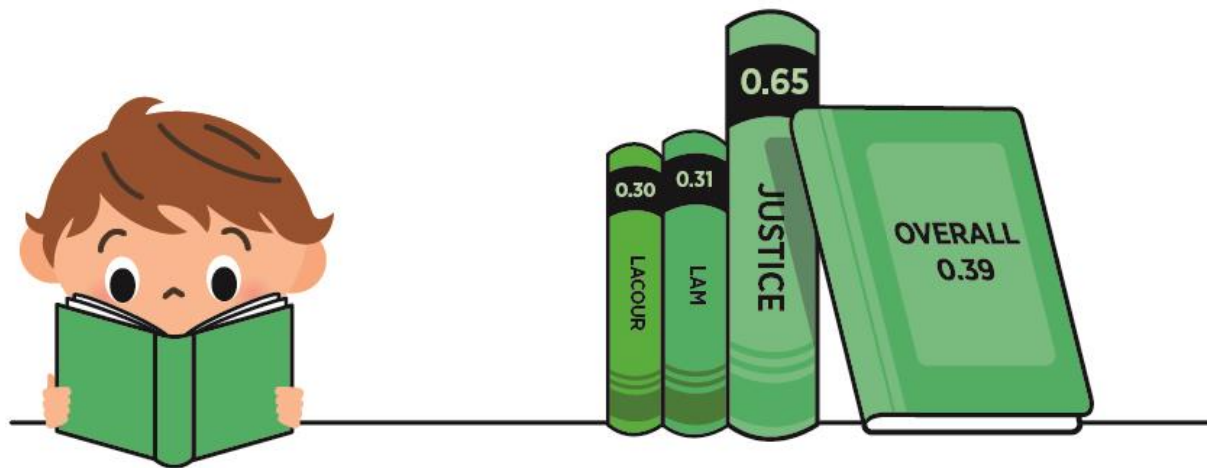
Subgroup – low SES

Mulitple Outcome Studies by Low SES

Author	Year	ES (95% CI)	% Weight
Reese	2010	-0.35 (-1.20, 0.50)	9.91
Lonigan	1998	0.22 (-0.52, 0.95)	11.12
Lacour	2011	0.29 (-0.52, 1.11)	10.31
Boyce	2010	0.37 (-0.09, 0.83)	14.26
Aram	2013	0.79 (0.26, 1.32)	13.44
Vally	2015	1.09 (0.69, 1.49)	14.87
Korat	2013	1.13 (0.59, 1.67)	13.33
Lljalba	2015	1.75 (1.17, 2.34)	12.77
Overall (I-squared = 75.0%, p = 0.000)		0.72 (0.31, 1.12)	100.00

NOTE: Weights are from random effects analysis

-1.5 -1 -.5 0 .5 1 1.5
No improvement   Improvement
Standardized mean difference

Conclusions from review 1

- Confirms positive outcomes but difference is more consistent and higher for comprehension

- Pre-reading and expressive outcomes weaker but positive

- How big are the overall effects? All moderate (Cohen). NB the Education Endowment Foundation suggest that an effect of 0.68 is equivalent to an eight month advantage

- Dialogic reading only for Expressive and shared reading/dialogic for Receptive where shared reading had a stronger effect

- Much higher effects for CDI but………

- Not much difference for SES, type of parent/child reading or age

- Some suggestion that dosage may NOT be a key issue

- NB these studies may be of vulnerable children but not children with diagnosed problems

Review(s) #2
Parent/child interaction therapy

- Adapted from the work (and slides) Ann Kaiser, Vanderbilt Department of Special Education, Vanderbilt Kennedy Center

- Focus on children with language difficulties (sometimes accompanied by ASD,ADHD etc) referred to a university clinic

- Generally not focused on the most disadvantaged children but the Big Word Gap work does include these children

- Again the focus here is outcomes rather than the specifics of the intervention

Dancing in the Dark

Typical children

- Easy to read social cues
- Follow a dependable developmental trajectory
- Interested in partners and objects
- Use multiple strategies to learn language
- Quickly move through developmental stages

Children with communication delays

- May be difficult to determine child intentions
- Slower, possibly disrupted developmental trajectory
- Vary in social and object interest, play , daily living skills
- Fewer strategies, less well developed
- May move slowly through developmental stages

Parent- Implemented Enhanced Milieu Teaching

- **Based on two assumptions**:
  - Communication is learned in interactions with partners
  - Changing partner support for communication can change child outcomes
- **Goals:**
  - Improving generalized communication outcomes for children
  - Understanding the conditions in which communication and language are learned

Maximizing Intervention Effects
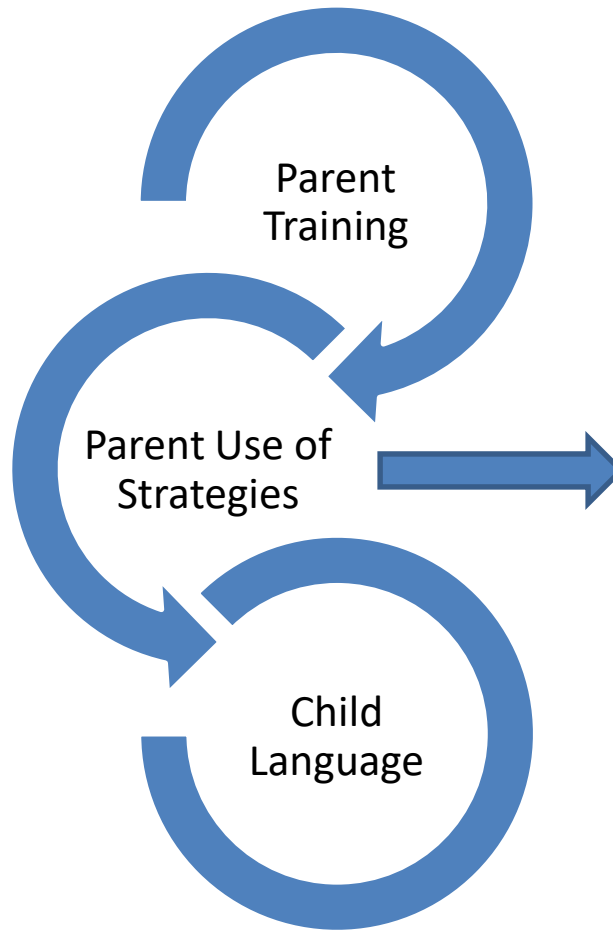
Enhanced Milieu Teaching (EMT)

- EMT is a widely studied intervention with consistently positive effects on various language forms and structures (Kaiser & Hampton, 2016).
- Distinctive feature is that includes input from BOTH parent plus speech and language therapist
- Gains in language have been observed in children with intellectual disabilities:
    - Across settings (Alpert & Kaiser, 1992; Hancock & Kaiser, 1996; Kaiser, Hancock, & Nietfeld, 2000; Kaiser & Roberts, 2013)
    - Classes of language structures (Goldstein & Mousetis, 1989; Warren, Gazdag, Bambara, & Jones, 1994),
    - Global language development (Hancock & Kaiser, 2002; Kaiser et al., 2000; Kaiser & Roberts, 2103).

Parent Training

Parent Use of Strategies

Child Language

Why Parent <u>Plus</u> Therapist?

- **<u>Therapists</u>**
  - Provide intensive intervention using all
  - components
  - High level of fidelity
  - Can fine tune intervention to include other strategies (direct teaching, more complex forms, peers)
  - Can "prime" children so that parents are likely to be more successful
- **<u>Parents</u>**
  - Teach in the context of relationship and emotional connection
  - Have more opportunities to teach in functional contexts and routines
  - Immediately benefit from the improved communication with their child
  - Can tailor strategies and communication to the child's changing communication skills and needs

Meta Analyses of Parent-Implemented Interventions for Communication

- **Group Design**
  - Roberts & Kaiser, 2011
  - Hampton & Kaiser, 2016
  - Kaiser, Cunningham, Heidlage, Trivette, Roberts, et al., 2017 (Bridging the Word Gap Work Group I; ongoing)

- **Single Case** (syntheses, SC meta approach)
  - Moyle et al., 2014
  - Meadan et al., 2016
  - Frey, Barton, et al., 2017 (Bridging the Word Gap Work Group I, ongoing)

Roberts & Kaiser, 2011 Meta-analysis Questions

- Does training impact parent use of language support strategies?

- Do parent-implemented interventions positively affect language outcomes of young children with language impairments compared to control?

- Do parent-implement interventions positively affect language outcomes compared to treatment by therapists?

Meta-analysis:
Kaiser & Roberts, 2011

- Study Type: 13 randomized group experiments and matched control

- Average Sample Size: 25 participants (range 12-47)

- Diagnosis: 6 DD; 8 Language Delay

- Age: Majority of studies included children between 24 and 36 months of age.

- Intervention: 6 studies were Hanen Parent Program

    – 8 were between 10-13 weeks and had less than 26 hours of parent training.

- Control Group: 3 community services, 11 non-treatment control

Meta-analysis: Roberts & Kaiser, 2011

Does parent training change parent behavior?

	g	CI	p
Parent responsiveness	.73	(.26, 1.2)	.00
Rate	.26	(-.13, .64)	.19
Use of language models	.38	(-.03, .80)	.07

Meta-analysis: Roberts & Kaiser, 2011

- Do parent-implemented interventions positively affect child language outcomes? (***compared to control***)
- Which child language outcomes have the largest effects?

	g	CI	*p*	n
Overall language	.45	(-.02, .92)	.06	7
Expressive language	.61	(.00, 1.21)	.05	7
Receptive language	.35	(.05, .65)	.02	7
Expressive vocabulary	.48	(.24, .73)	.00	14
Receptive vocabulary	.38	(.10, .66)	.01	5
Expressive morpho-syntax	.82	(.37, 1.38)	.00	7
Rate	.51	(.18, .84)	.00	9

Meta-analysis: Roberts & Kaiser, 2011

- Do parent-implemented interventions positively affect child language outcomes? (*compared to therapist implemented intervention)*

	g	CI	p
Overall language	.24	(-.26, .73)	.35
Expressive language	.25	(-.43, .93)	.47
Receptive language	.41	(.08, .76)	.02
Expressive vocabulary	.14	(-.25, 54)	.69
Receptive vocabulary	.19	(-.26, .64)	.41
Expressive morpho-syntax	.42	(.06, .79)	.02
Rate	-.15	(-.56, .27)	.48

Hampton & Kaiser, 2016
Meta Analysis Questions

- What are the effects of intervention on the spoken language outcomes for children with ASD?

- What features of intervention account for differences in outcomes?

Meta-analysis: Hampton & Kaiser, 2016

- Study Type: 16/26 were randomized group experiments

- Sample Size: 11-294

- Diagnosis: All children with ASD; 81% male;

- Age: mean 3.33 yrs; range; 1.75 – 4.18 months

- Intervention:

    – 92% included some naturalistic teaching

    – 50% included some direct teaching components

    – Both targeted language and comprehensive interventions

- Control Group: treatments as usual, highly variable

Meta Analysis Hampton & Kaiser, 2016

- What are the effects of intervention on the spoken language outcomes for children with ASD?

		g	CI	n
● Overall		.26	(-0.11, .42)	26
Clinician		.08	(-.47, 0.62)	5
Parent only		.11	(-0.06, .28)	9
Parent + Clinician		.42	(0.24-0.68)	12

Hampton & Kaiser, 2016

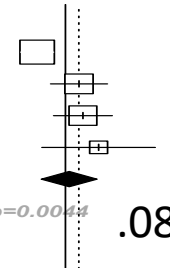Spoken language outcomes by implementer

Ann Kaiser 4/17

Clinician Only

Parent Only

Parent + Clinician

95%−CI W(random)

Study

Clinician
Boyd et al., 2014   −0.56 [−0.88; −0.24] 6.0%
Kasari et al., 2008   0.27 [−0.29; 0.83] 4.0%
Whalen et al., 2010   0.35 [−0.23; 0.92] 3.9%
Goods et al., 2013   0.65 [−0.46; 1.77] 1.6%
Random effects model   0.08 [−0.47; 0.62] 4.8%
Heterogeneity: I−squared=77.1%, tau−squared=0.2135, p=0.0044   .08

Parent
Venker et al., 2012   −0.50 [−1.50; 0.50] 1.9%
Carter et al., 2011   −0.06 [−0.58; 0.46] 4.3%
Tonge et al., 2014   −0.06 [−0.52; 0.41] 4.7%
Green et al., 2010   0.00 [−0.32; 0.32] 6.0%
Rogers et al., 2012   0.10 [−0.29; 0.49] 5.3%
Hardan et al. 2014   0.41 [−0.16; 0.98] 3.9%
Wetherby & Woods, 2006   0.43 [−0.23; 1.09] 3.4%
Schertz et al., 2013   0.43 [−0.37; 1.23] 2.6%
Drew et al., 2002   0.56 [−0.23; 1.35] 2.7%
Aldred, Green, & Adams, 2004   [−0.85; 3.99] 0.4%
Random effects model   [−0.06; 0.28] 50.6%
Heterogeneity: I−squared=0%, tau−squared<0.0001, p=0.5264   .11
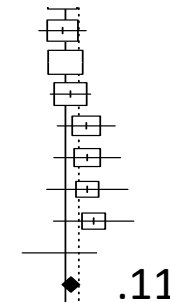
Parent and clinician
Salt et al., 2002   −0.34 [−1.34; 0.65] 1.9%
Roberts et al., 2011   0.05 [−0.40; 0.49] 4.9%
Solomon et al., 2014   0.16 [−0.24; 0.55] 5.3%
Siller, Hutman, & Sigman, 2013   0.24 [−0.25; 0.73] 4.5%
Bloch et al., 1980   0.25 [−0.53; 1.02] 2.7%
Casenhiser, Shanker, & Stieben, 2013   0.27 [−0.27; 0.81] 4.1%
Strain & Bovey, 2011   0.49 [0.25; 0.73] 6.7%
Dawson et al., 2010   0.55 [−0.04; 1.14] 3.8%
Cohen et al., 2006   0.58 [−0.06; 1.22] 3.5%
Vivanti et al., 2014   0.59 [0.07; 1.12] 4.2%
Remington et al., 2007   0.95 [0.33; 1.56] 3.6%
Howard et al., 2005   1.09 [0.53; 1.65] 4.0%
Random effects model   0.60] 44.5%
Heterogeneity: I−squared=36.4%, tau−squared=0.0324, p=0.0993   .42

Random effects model   **0.26 [0.11; 0.42] 100%**
Heterogeneity: I−squared=57.7%, tau−squared=0.0825, p=0.0001

−2   0   2
Favors BAU   Favors Intervention

Meta Analysis Hampton & Kaiser, 2016

- For children with ASD, there appears to be value added by including parents in comprehensive or language specific early intervention

- Few studies compared parent-implemented directly, however

- No significant effects for other intervention features– age, comprehensive/targeted intervention, dosage

- Wide range of measures for spoken language; most include vocabulary

- Although ES are positive, actual gains are modest

- Findings similar to those in Kaiser & Roberts, 2013

Meta-analysis: Kaiser-BWG 2017

Conducted as one part of major literature review related to Bridging the Word Gap
(HRSA Research Network)

1. What is the impact of parent-implemented intervention on <u>child expressive and receptive language outcomes</u>?

2. What is the impact of parent-implemented intervention on child <u>vocabulary outcomes</u>?

3. Do child vocabulary outcomes vary by type of intervention?
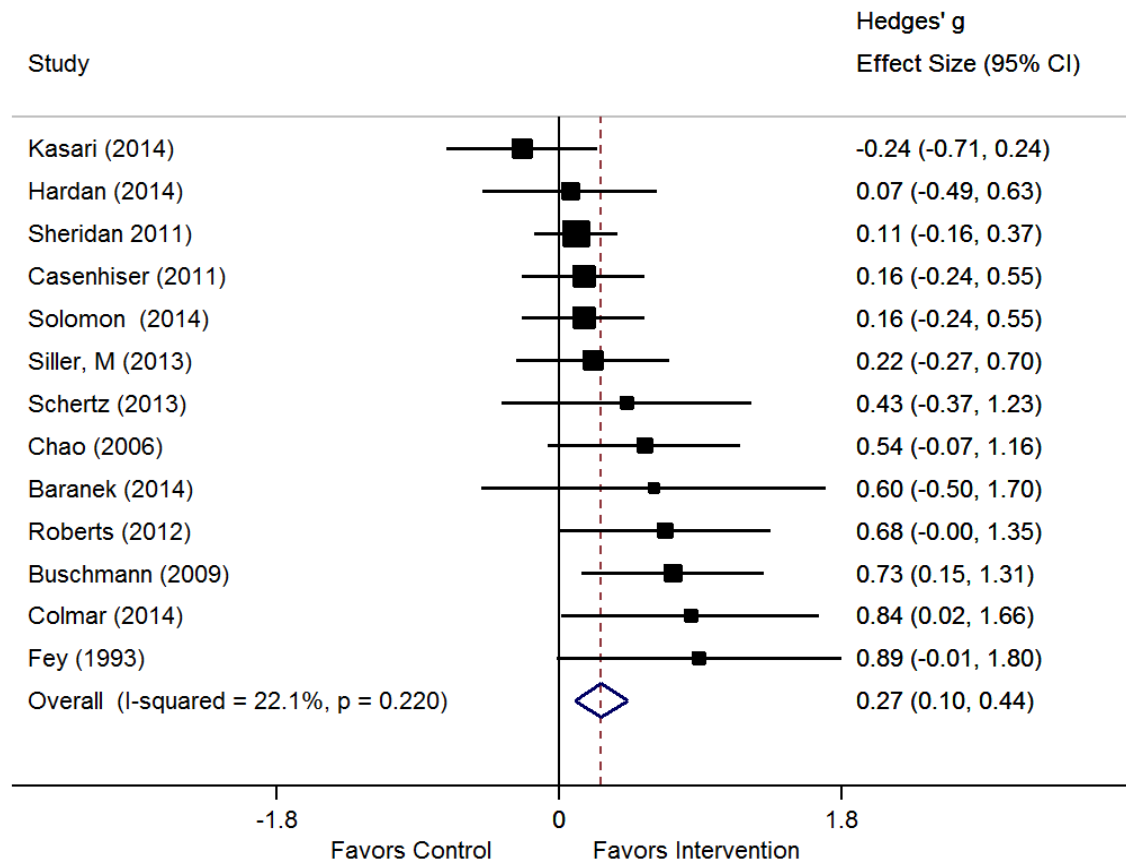
Meta-analysis: Kaiser-BWG 2017

- Study Type: 25 randomized group experiments with BAU

- Average Sample Size: 68% had less than N= 50

- Diagnosis: 44% Language delay; 36% ASD; 20% other

- Age: 0-8 years;   36% 0-3 yrs ; 56% 4-5 Yrs

- Intervention: The majority (18) naturalistic play/routines similar to but not as intensive as EMT

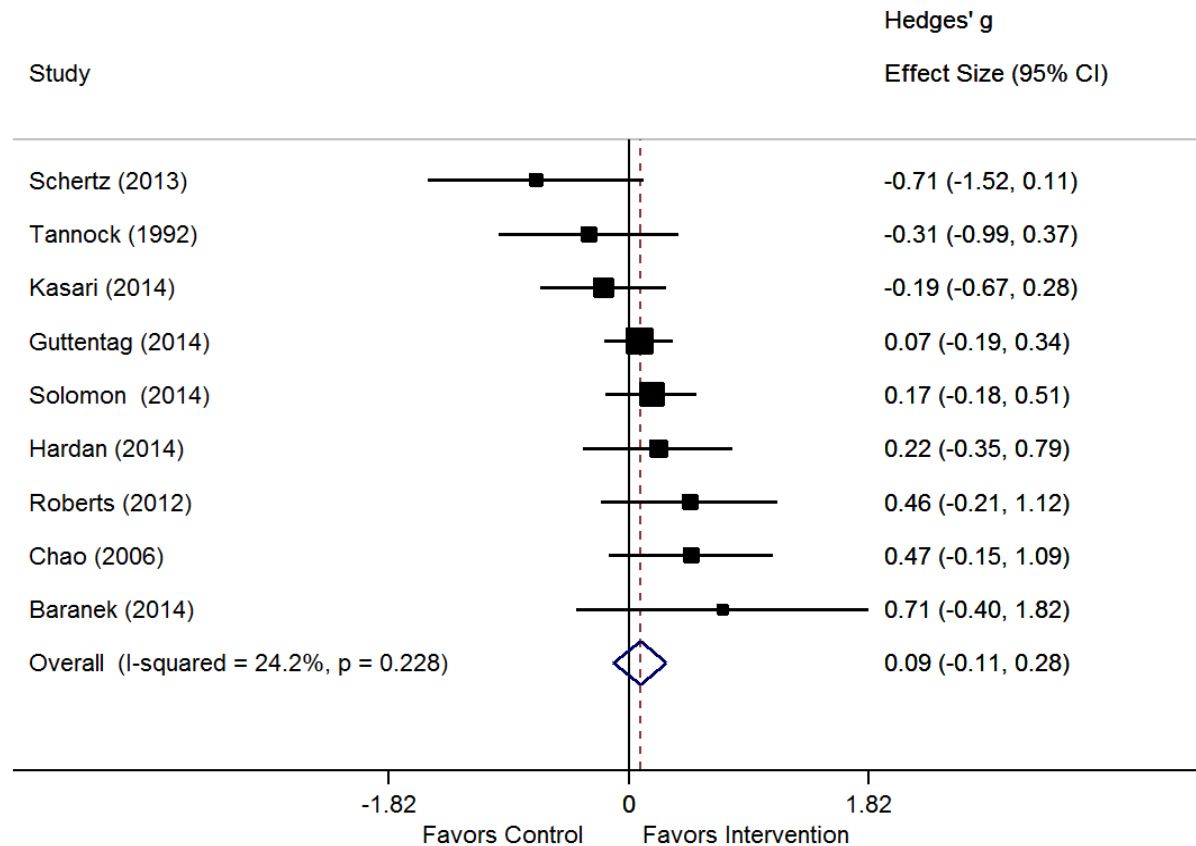- Control Group: BAU, waitlist

Meta-analysis: Kaiser-BWG, 2017

- What is the impact of parent-implemented intervention on child expressive and receptive language outcomes?

	g	CI	p	n
Expressive language	.27	(0.10- 0.44)	.05	13
Receptive language	.09	(-0.11, 0.28)	NS	10

Child Expressive Language Outcomes
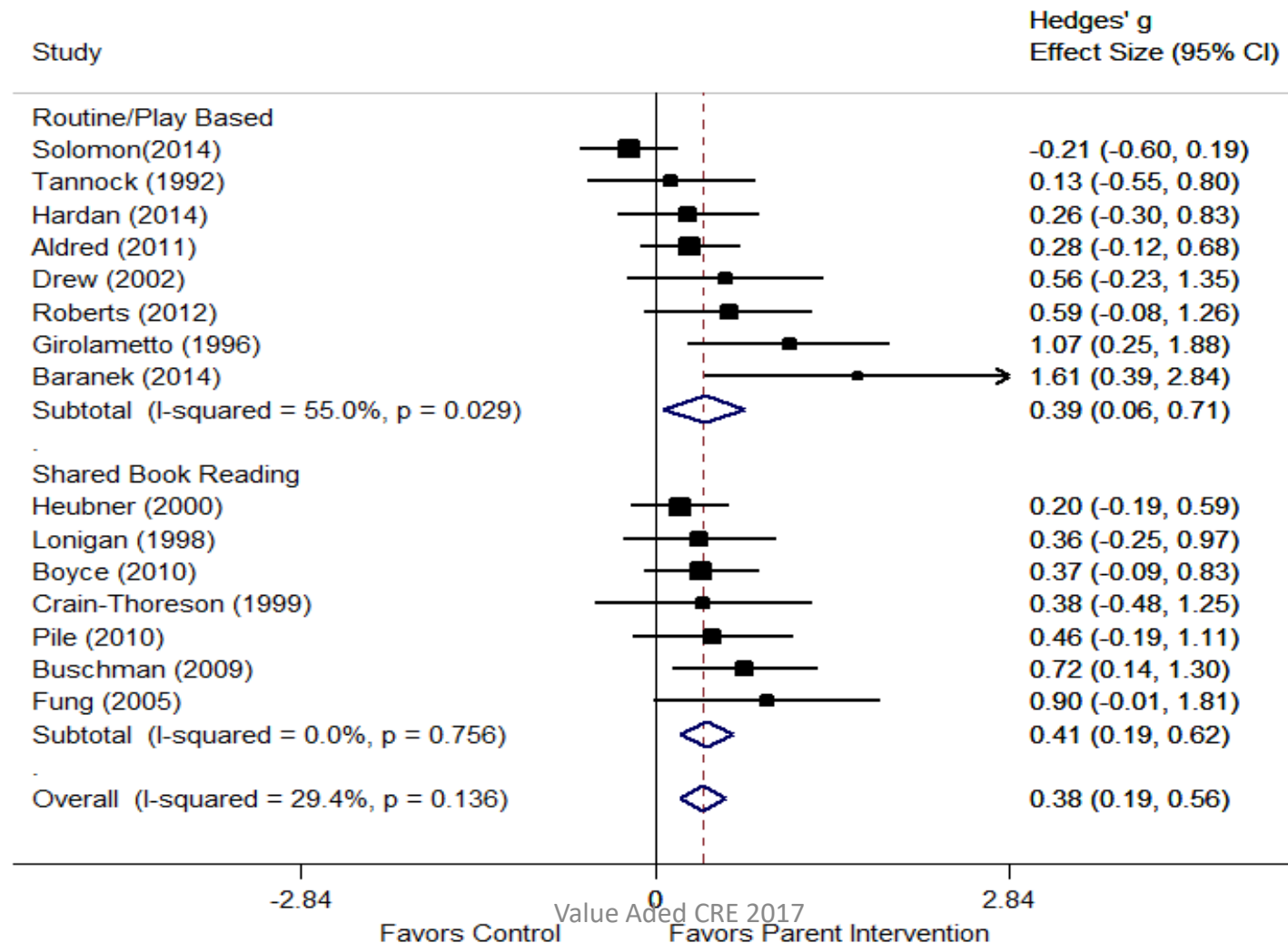
Child Receptive Language Outcomes

Meta-analysis: Kaiser-BWG, 2017

What is the impact of parent-implemented intervention on child vocabulary outcomes?
Do child vocabulary outcomes vary by type of intervention?

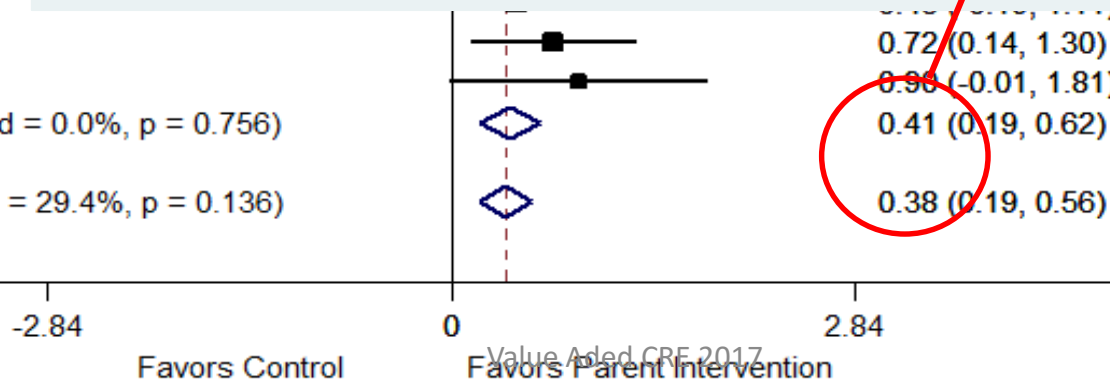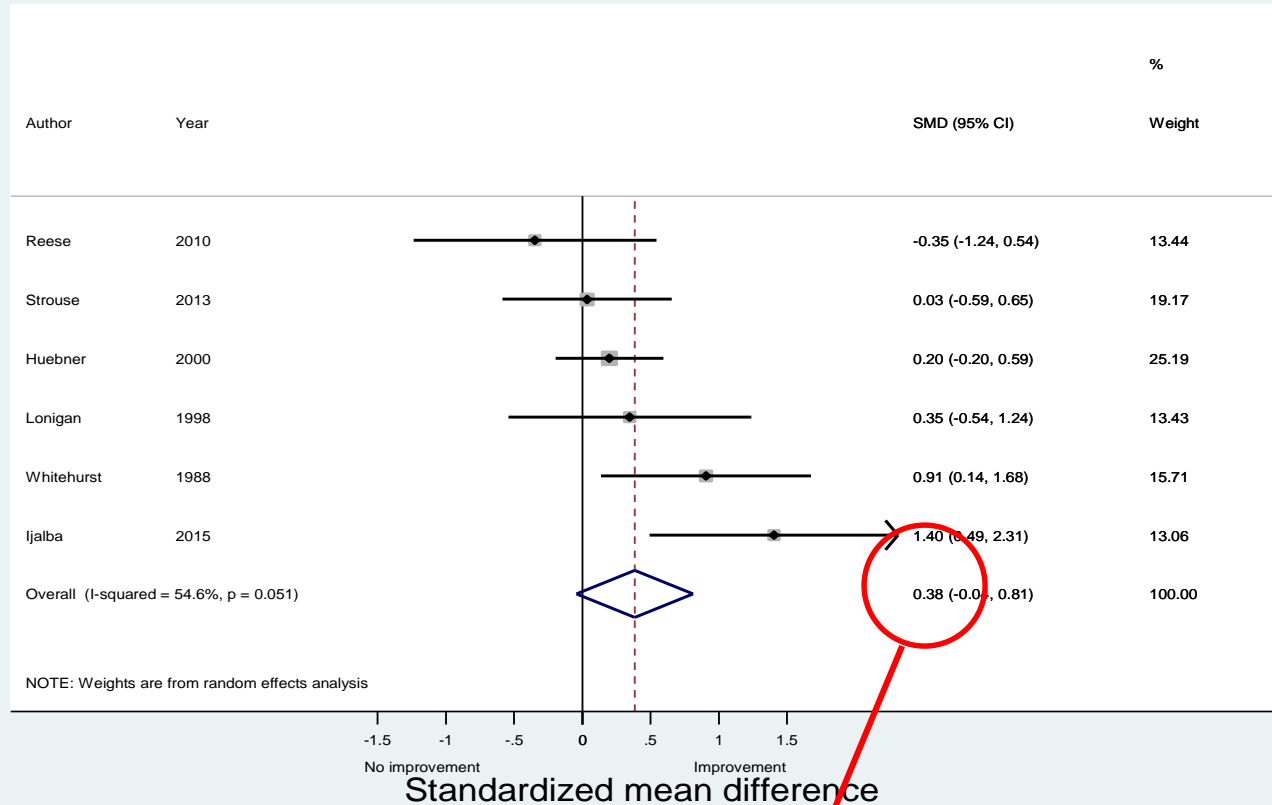|	g	CI	p	n
Vocabulary overall	.39	(.06-.71)	.05	16
Vocabulary Routines	.41	(.19-.62)	.00	7
Vocabulary Naturalistic	.38	(.19-.56)	.05	9

Child Vocabulary Outcomes

Expressive Language (EOWPVT)

Study

Routine/Play Based
Solomon(2014)
Tannock (1992)
Hardan (2014)
Aldred (2011)
Drew (2002)
Roberts (2012)
Girolametto (1996)
Baranek (2014)
Subtotal (I-squared =

Shared Book Reading
Heubner (2000)
Lonigan (1998)
Boyce (2010)
Crain-Thoreson (199
Pile (2010)
Buschman (2009)
Fung (2005)
Subtotal (I-squared = 0.0%, p = 0.756)

Overall (I-squared = 29.4%, p = 0.136)

Author	Year	SMD (95% CI)	% Weight
Reese	2010	-0.35 (-1.24, 0.54)	13.44
Strouse	2013	0.03 (-0.59, 0.65)	19.17
Huebner	2000	0.20 (-0.20, 0.59)	25.19
Lonigan	1998	0.35 (-0.54, 1.24)	13.43
Whitehurst	1988	0.91 (0.14, 1.68)	15.71
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Overall (I-squared = 54.6%, p = 0.051)		0.38 (-0.0, 0.81)	100.00

NOTE: Weights are from random effects analysis

-1.5 -1 -.5 0 .5 1 1.5
No improvement   Improvement
Standardized mean difference

0.72 (0.14, 1.30)
0.90 (-0.01, 1.81)
0.41 (0.19, 0.62)

0.38 (0.19, 0.56)

-2.84   0   2.84
Favors Control   Favors Parent Intervention

Value Added CRE 2017

48

Implications for Translating Research to Practice:
Describe key components of parent training interventions

- **Describe the components of the intervention**
  - What are the active ingredients in the primary intervention?
  - What are the dosage and frequency of the intervention?
  - What are intervention active ingredients that parents are taught?
  - What are the procedures and settings for teaching parents to implement the intervention?
  - What are the procedures and measures for insuring fidelity across the primary intervention, training parents and parent implementation?

- **Measure implementation dosage and fidelity**
  - Primary intervention
  - Parent training
  - Parent implementation
  - Parent generalization and maintenance

Implications for Research to Practice: Build systems for implementation

- **<u>Manualize treatments with fidelity instruments</u>**
  - Primary intervention descriptions, fidelity instruments, benchmarks for implementation
  - Parent training intervention-- descriptions, fidelity instruments, benchmarks for implementation
  - Parent implementation, fidelity instruments, bench marks

- **<u>Develop procedures for training parent trainers</u>**
  - Complex skill set
  - Fluency in using primary intervention
  - Fluency in parent training strategies
  - Skills for responding to parent context, needs, knowledge,
  - Ability to trouble shoot child challenges (behavior, preferences, slow learning) and parent challenges (child behavior, activities)

An "old chestnut" - measurement

- Most of the process of *identification* and *intervention* depends on our ability to measure what we are interested in (and what is most important)

- If we don't agree on who needs parent/child interaction work we are unlikely to identify children with interventions very effectively

- Standardised assessments of language are often relatively straightforward to carry out with the right training but they are not available for everyone to use

- Video interaction is great for researchers and PhD students but it is not a clinical tool

- Do we provide intervention to parents of all children with low language levels or should we be more discerning?

A solution?

IMPACT: Improving Parent And Child interaction to enhance oral language development A *Marie Skłodowska-Curie* fellowship:
Dr Penny Levickis

A key objective: to determine whether an observational rating scale of parent-child interaction can be used by heath visitors/community health nurses as part of the universal health visiting service to identify families most likely to benefit from parent-focused interventions for the promotion of child oral language

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Short Report

Maternal responsiveness predicts child language at ages 3 and 4 in a community-based sample of slow-to-talk toddlers

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Maternal Behaviors Promoting Language Acquisition in Slow-to-Talk Toddlers: Prospective Community-based Study

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ABSTRACT: *Objective:* To determine, in a community-based sample of slow-to-talk toddlers, the extent to which specific maternal responsive behaviors at 24 months predict child language at 24 and 36 months.

(J Dev Behav Pediatr 35:274–281, 2014)

Parent-child Interaction Rating Scale	
Rating	**Definition**
1 = very low	Mother rarely responds in a developmentally appropriate way either verbally or non-verbally to any of Child's gestures or verbalisations AND Mother attempts to redirect Child's behaviour, rather than following Child's interests.
2 = low	Mother responds occasionally in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalisations AND/OR Mother spends more time attempting to redirect Child's behaviour than following Child's interest.
3 = moderate	Mother spends some time responding in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalisations, and some time ignoring them AND/OR Mother spends equal time following Child's interest and redirecting Child's behaviour.
4 = high	Mother often responds in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalisations AND/OR Mother spends more time following Child's interest than redirecting Child's behaviour.
5 = very high	Mother frequently responds in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalisations AND Mother rarely attempts to redirect Child's focus from the current activity, but follows Child's interests.

Conclusions

- A series of meta-analyses demonstrate the value of interventions engaging with parents in the early years – effect sizes starting to come together

- Drawing parents attention to the core characteristics of interaction using books and toys clearly has the potential to lead to immediate gains

- Requires clear instruction and collaboration/partnership with professionals and can take time (it does not just happen by osmosis) and it is not just a cheap way of getting parents to do things

- Need to be clear that p/ch interaction would be useful for parent and child not just assume that low language means that p/ch interaction work is indicated

- There remain issues about who takes responsibility for this (mothers, father, grandparents, how specialised the interventionist needs to be, what the longer term implications are - not just in terms of child outcomes but also parental confidence etc.

- More research: key ingredients and causal mechanisms across time, characteristics of responsive more/less parents etc.

- Next steps – considerable practitioner and research interest (see Cost Action) with a growing awareness of the complexity of the issues.