

A systematic review of breastfeeding interventions among postpartum women using the Behaviour Change Techniques taxonomy

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Background

Methods

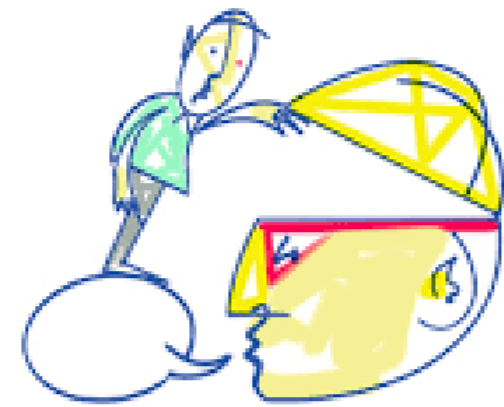


Exclusive breastfeeding is recommended for the first six months following birth ¹.



Reduced risk of: ^{2,3}

- Allergies, sudden infant death syndrome, and developing type 2 diabetes for **infant**
- Hypertension, CVD and breast/ovarian cancers for **mother**



No evidence of the effectiveness of breastfeeding *interventions or the components of these interventions (Behaviour Change Techniques, BCTs)*

BCTs refer to those components of an intervention that are designed to change behaviour. ⁷

Barriers: ⁴

- Partner disapproval
- Uncertainty about what to expect
- Parental lack of knowledge
- Beliefs about breastfeeding

Facilitators: ⁵

- Partner/mother support
- Social support
- Self-efficacy
- Beliefs about breastfeeding

PROBLEM

- In more high-income countries: 12-month breastfeeding < 20%
- In the UK, initial exclusive breastfeeding 60% and drops to 43.7% 6-8 weeks postpartum
- In the US, 22% report exclusive breastfeeding in 6 months postpartum
- In the UK, only 1% report exclusive breastfeeding in 6 months postpartum ⁶

- The aims of this systematic review are to (a) describe the published evidence of interventions aiming to promote mixed and exclusive breastfeeding among postpartum women, (b) identify and report the BCTs used in these interventions, and (c) investigate the overall effectiveness of interventions aiming to promote exclusive breastfeeding among postpartum women.

PRISMA Guidelines

- Search July – December 2017
- Electronic databases: PsycInfo, EMBASE, MEDLINE
- Study selection:

Population (women postpartum)

Interventions (Promoting exclusive or mixed breastfeeding)

Comparisons (Any type of control group)

Outcomes (exclusive and mixed breastfeeding as defined by WHO)

Study design (at least one intervention and one control group)

+ English language

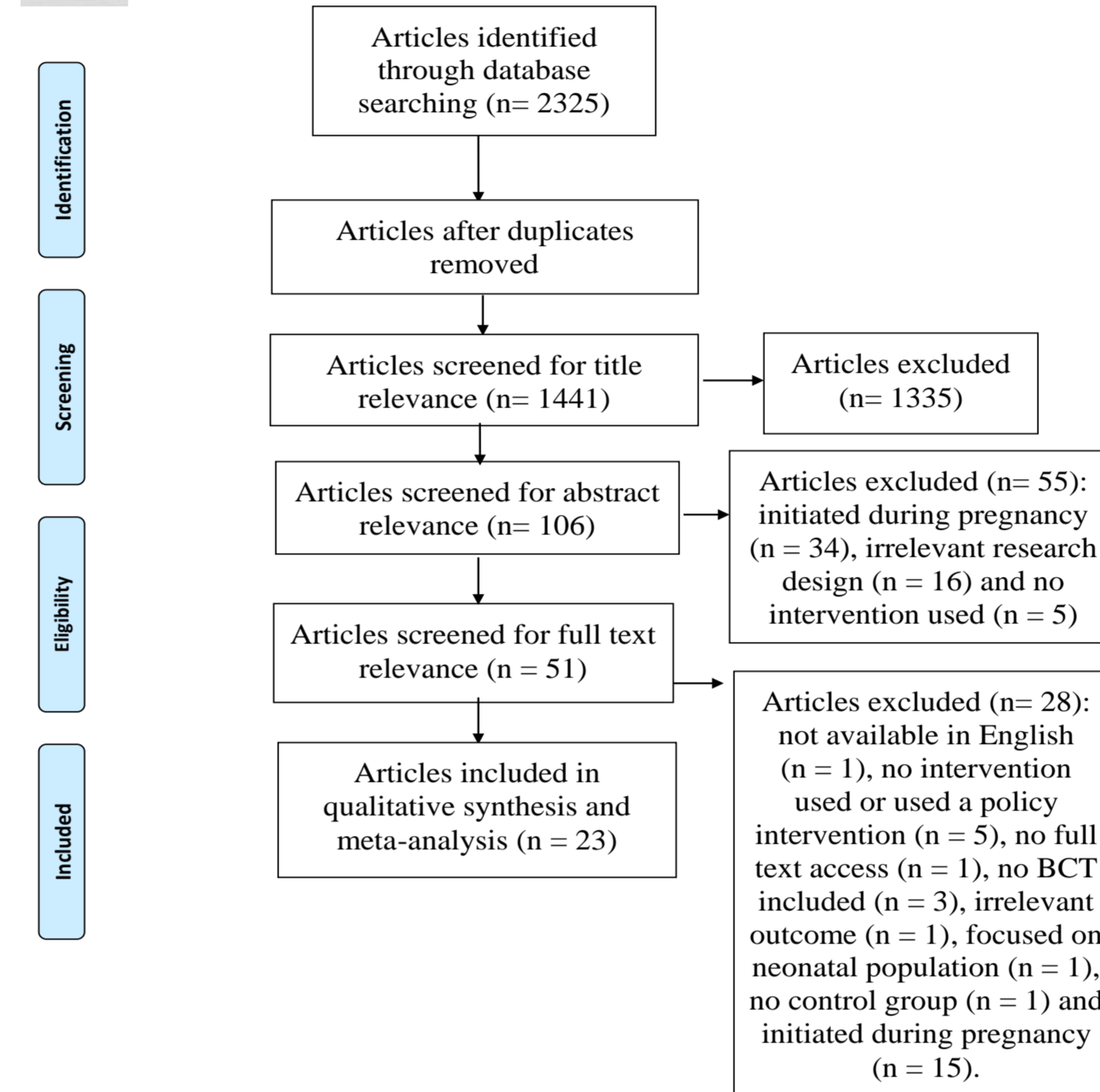
- Study exclusion
- Initiated during pregnancy
- Qualitative, cross-sectional
- Non-peer reviewed

Abstract, full-text screening, data extraction and BCT coding
Proforma used, quality checklist, 10% cross-coding, consensus meeting
IRR = 0.66

Meta-analysis: The DerSimonian and Laird method was used to conduct the random effects model meta-analysis, where log-odds ratio were calculated and transformed back into odds ratio.



PRISMA Flow Diagram

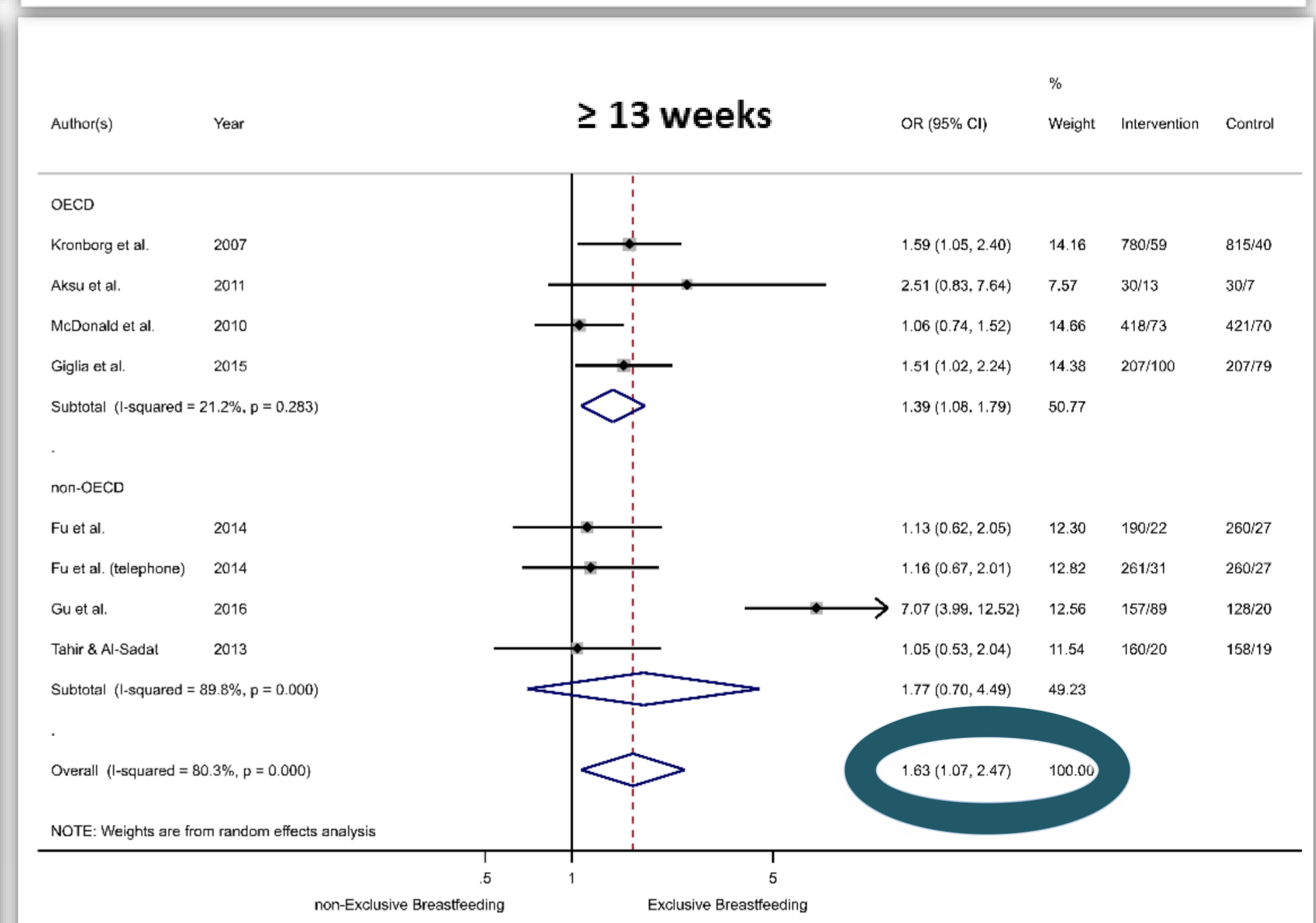
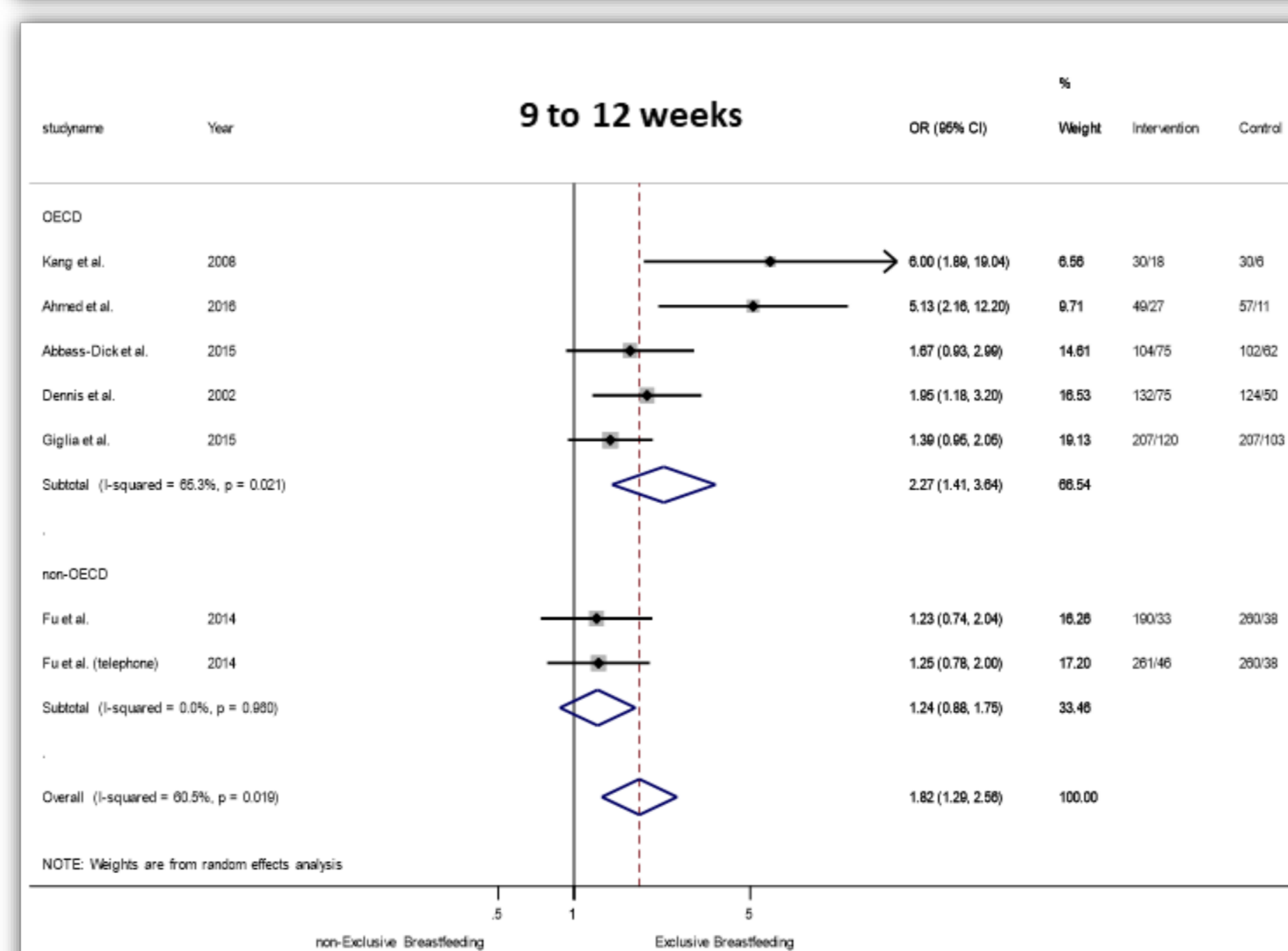
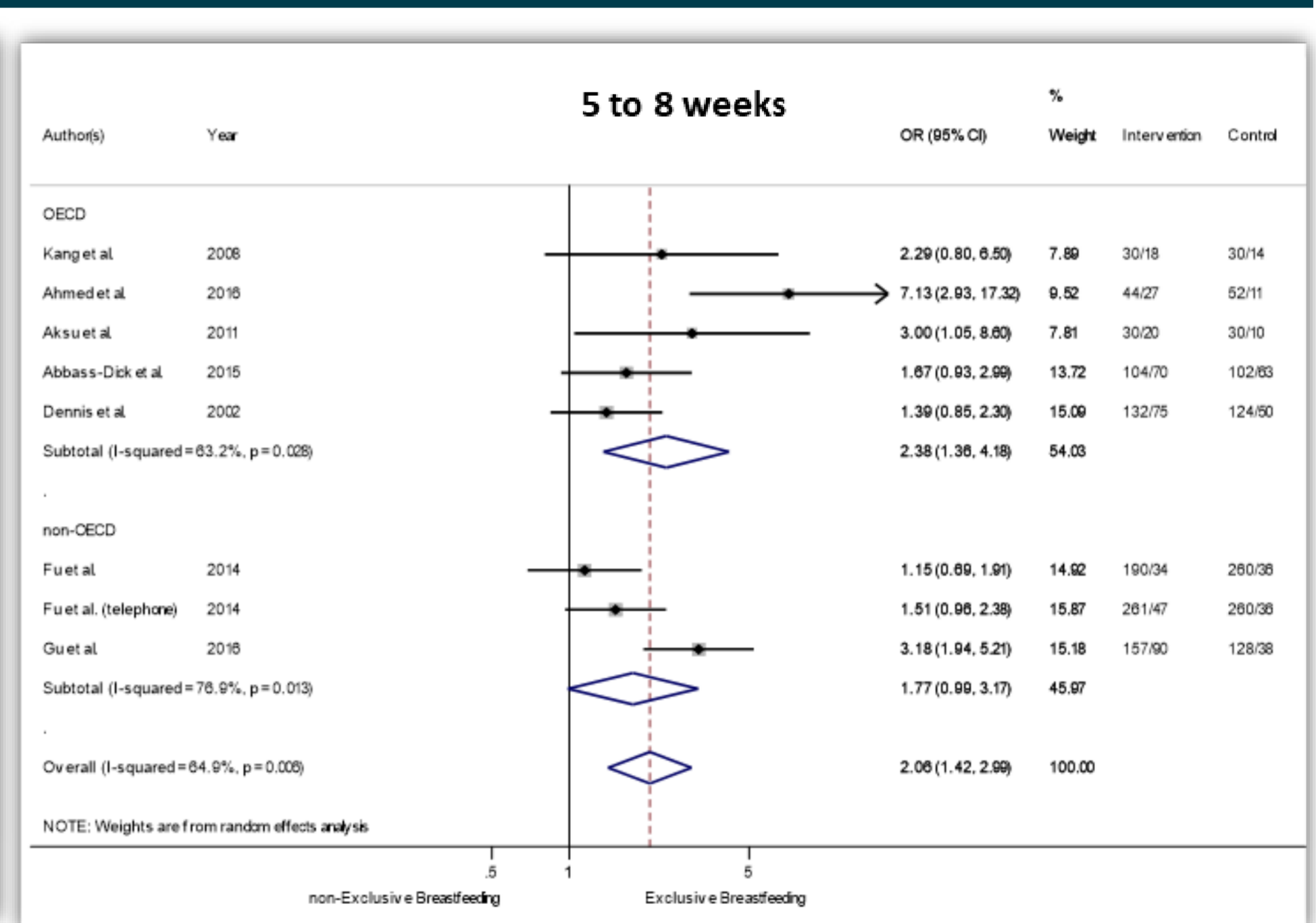


Author	Low risk of bias	High risk of bias	Unclear risk of bias
Abbas-Dick, 2015	+	-	?
Ahmed, 2016	+	-	?
Aksu, 2011	+	-	?
Albert, 2011	+	-	?
Bica, 2014	+	-	?
Dennis, 2002	+	-	?
Frank, 1987	+	-	?
Fu, 2014	+	-	?
Giglia, 2015	+	-	?
Grossman, 1990	+	-	?
Gu, 2016	+	-	?
Henderson, 2001	+	-	?
Khreshheh, 2011	+	-	?
Kronborg, 2007	+	-	?
Labaree, 2005	+	-	?
McDonald, 2010	+	-	?
McLachlan, 2016	+	-	?
Porteous, 2000	+	-	?
Pugh, 2010	+	-	?
Schy, 1996	+	-	?
Tahir, 2013	+	-	?
Washio, 2017	+	-	?

Findings

Study	OECD	Design	Sample	Length	Mode of delivery	Delivered by	N of BCTs
Abbas-Dick 2015	Y	RCT	214	3 weeks	Combined	Provider	5
Ahmed 2016	Y	RCT	106	30 days	Remote	Peer	6
Aksu 2011	Y	RCT	60	< 1 day	Face-to-face	Peer	6
Albert 2011	Y	RCT	46	NR	Face-to-face	Provider	2
Bica 2014	N	RCT	342	4 months	Face-to-face	Provider	4
Dennis 2002	Y	RCT	258	12 weeks	Combined	Peer	4
Frank 1987	Y	RTC	343	3 months	Combined	Provider	3
Fu 2014	N	CRCT	724	4 weeks	Remote	Provider	9
Giglia 2015	Y	RCT	427	21 months	Remote	Peer	3
Grossman 1990	Y	RCT	97	3 weeks	Combined	Provider	6
Gu 2016	N	RCT	352	6 months	Combined	Provider	8
Henderson 2001	Y	RCT	160	3 days	Face-to-face	Provider	5
Kang 2008	Y	NRCT	60	3 days	Face-to-face	Provider	14
Khreshheh 2011	N	RCT	90	4 months	Combined	Provider	8
Kronborg 2007	Y	RCT	1595	6 months	Face-to-face	Provider	6
Labaree 2005	Y	RCT	231	4 weeks	Face-to-face	Provider	1
McDonald 2010	Y	RCT	849	6 weeks	Combined	Provider	5
McLachlan 2016	Y	CRCT	6675	9 months	Face-to-face	Provider	3
Porteous 2000	Y	RCT	51	4 weeks	Combined	Provider	4
Pugh 2010	Y	RCT	328	NR	Combined	Combined	3
Schy 1996	Y	RCT	150	NR	Combined	Provider	3
Tahir 2013	N	RCT	357	6 months	Remote	Provider	1
Washio 2017	Y	RCT	36	6 months	Face-to-face	Provider	2

Study	BCT (n)
1.2 Problem solving	
1.3 Goal setting (outcome)	
1.4 Action planning	
1.5 Review behaviour goal	
1.7 Review outcome goal	
1.9 Commitment	
2.2 Feedback on behaviour	
2.3 Self-monitoring of outcome of behaviour	
2.4 Self-monitoring of behaviour	
2.7 Feedback on outcome of the behaviour	
3.1 Social support	
3.2 Social support (practical)	
3.3 Social support (emotional)	
4.1 Information about health	
5.1 Information about social and environmental consequences	
5.4 Monitoring of emotional consequences	
5.8 Monitoring of behavioural consequences	
6.1 Demonstration of the behaviour	
7.1 Prompts/cues	
7.5 Remove aversive stimulus	
8.1 Stimulus control	
8.2 Practice/rehearsal	
9.1 Credible source	
9.2 Pros and cons	
10.1 Material incentive	
10.9 Material reward	
11.2 Behavioural persuasion	
12.2 Adding objects to the environment	
15.1 Verbal persuasion about capability	



Conclusions & Impact

- Significant moderate effect of the interventions overall on promoting exclusive breastfeeding, with women enrolled in intervention conditions being twice as likely to continue with exclusive breastfeeding versus women in control conditions. The effect beyond 9 weeks postpartum slightly decreased compared to the interval between birth and 8 weeks postpartum.
- The sensitivity analysis indicated that studies with high or unclear bias had a small impact on intervention effectiveness.
- Only three studies (13%) reported a theoretical framework on intervention development and partial breastfeeding (13%) in the control group.
- No study assessed exclusive breastfeeding at a time point beyond six months postpartum.
- The use of BCTs involving cognitive and behavioural aspects may help women develop coping mechanisms that therein facilitate exclusive breastfeeding.
- Promoting exclusive breastfeeding among postpartum women might be easier through channels that enable peer and professional support like peer supporters or educational social support from health professionals and family.

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