



Corrigendum

Corrigendum to “Interventions promoting exclusive breastfeeding up to six months after birth: A systematic review and meta-analysis of randomized controlled trials” [Int. J. Nurs. Stud. 80 (April) (2018) 94–105]



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The authors regret that some tables, figures that we supplied for publication did not reflect changes made to the paper during the review process.

As we have added two additional studies in our review and meta-analysis, we need to provide more information for those two additional articles. In terms of statistical analysis, all the figures have been changed after adding two studies. And some values on texts need to be changed as follows.

In the paper, on page 94 and 103, it states (OR=2.77; 95% CI: 1.81–3.76) for the effects of 27 breastfeeding promotion interventions.
⇒ This should be (OR=2.77; 95% CI: 1.92–3.99).

On page 94, it states (OR=2.76; 95% CI: 1.76–4.33) for the effects of a professional provider led intervention.
⇒ it should be OR=3.59; CI: 2.27–5.68).

On page 103, it states, the pooled outcome of fifteen interventions led by health professionals showed greater effectiveness (OR=2.76; 95% CI: 1.76–4.33) than the pooled outcome of ten interventions led by a layperson (OR=2.81; 95% CI: 1.45–5.43).

⇒ It should be the pooled outcome of seventeen interventions led by health professionals showed greater effectiveness (OR=3.59; 95% CI: 2.27–5.68) than the pooled outcome of ten interventions led by a layperson (OR=1.63; 95% CI: 1.06–2.50).

The error does not affect the major points of the study. The authors would like to apologize for any inconvenience caused.

Table 1 Evaluated Studies for Systemic Review and Meta-analysis

Intervention Type	Author (year)	Country	Sample Size (n)	Intervention Description	Intervention Time Schedule	Provider * Protocol for Provider Training Program
BFHI	Coutinho (2005)	Brazil	Exp.: 169 Con.: 161	BFHI <i>Postnatal period</i> (at hospital and home) - Session 1–10 (30 min/session): Encouraged 6 months EBF and maintain breastfeeding for at least 2 years Control group: Pre-intervention of BFHI	At 1–4, 6, 8 week & 3–6 months after birth	Midwives and nursing assistants *UNICEF/WHO Baby-Friendly Hospitals: 20-hr training
	Kramer (2001)	Republic of Belarus	Exp.: 8547 Con.: 7859	PROBIT (Expansion of BFHI step 10) <i>Postnatal period</i> (at polyclinics in maternal hospitals) - Session 1–6: Educated lactation techniques and importance of EBF continuation Control group: Standard of care	At 1–3, 6, 9, 12 months after birth	Midwives, nurses, physicians *Guidelines for BFHI lactation management training : 18-hr training

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Breastfeeding Emotional Support & Counselling	Kutlu (2007)	Turkey	Exp.: 1114 Con.: 2000	BFHI <i>Postnatal period</i> (at a medical institution) - Session 1: Provided breastfeeding training program Control group: Usual care	Once after birth	Pediatricians, gynecologists, family doctors, and nurses **WHO/UNICEF BFHI Guidelines: 3-day training
	Yotebieng (2015)	Congo	Exp.: 671 Con.: 304	BFHI <i>1–9 steps of BFHI & 1–10 steps of BFHI</i> (at the hospital) - Session 1–6: Follow-ups via telephone if visits were not achieved Control group: Standard of care	1–9 steps of BFHI & 1–10 steps of BFHI: At 1, 6, 10, 14, 18, 24 weeks after birth	Trained health care workers *WHO/UNICEF BFHI course
	Bhandari (2003)	India	Exp.: 588 Con.: 527	Community-based promotion of exclusive breastfeeding <i>Postnatal period</i> (at home) - Session 1–9: Advised immediate breastfeeding and 6 months EBF using hand- outs Control group: Discussed on family planning & immunization	During the 6months after delivery	Health and nutrition workers, auxiliary nurse midwives **Management of Childhood Illnesses Training Manual
	Chapman (2013)	United States	Exp.:103 Con.:103	Specialized breastfeeding peer counselling <i>Prenatal period</i> (at hospital prenatal clinic) - Session 1–3: Educated on breastfeeding planning development and risks of formula feeding while assessing previous breastfeeding experiences/knowledge <i>Postnatal period</i> (at home) - Session 4–14: Provided large breastfeeding sling to promote mother-infant bonds and breastfeeding - Additional phone calls and home visits provided as needed Control group: Brief breastfeeding discussions during routine clinic visits	3 prenatal visits; 3 visits within 1 week after birth; twice a week at 2, 3, 4 week after birth; once a week at 5, 6 week after birth	Specialized breastfeeding peer counsellors *BHP26 and La Leche League curricula
	Jolly (2012)	United Kingdom	Exp.: 271 Con.: 301	Antenatal and postnatal peer support <i>Prenatal & Postnatal period</i> (at the children's center or home) - Session 1–3: Supported breastfeeding continuation and provided required advice/ reassurance either Control group: Routine maternity care - Community pre/postnatal midwife care	During prenatal visits; within 24– 48 h after birth	Peer support workers **WHO/UNICEF Baby Friendly breast- feeding management course
	Morrell (2000)	England	Exp.: 311 Con.: 312	Practical and emotional support <i>Postnatal period</i> (at home) - Session 1–10 (180 min/session): Supported emotions of mothers in caring/feeding newborns Control group: Conventional postnatal care	During the first 28 days after birth	Community midwifery support workers
	Ochola (2013)	Kenya	Exp.: 240 Con.: 120	FBSICG <i>Prenatal period</i> (at the antenatal clinic) - Session 1 (30–40 min): Counselling on EBF and prolonged breastfeeding advantages, lactation techniques, and common breastfeeding complications HBICG <i>Prenatal period</i> (at the antenatal clinic) - Session 1: Same as FBSICG intervention <i>Postnatal period</i> (at home) - Session 2–7: Addressed individual maternal needs Control group: Usual standard health and nutrition group education	FBSICG: During 1 week of enrollment HBICG: During 1 week of enrollment; during 1 week & 1–5 month after birth	Peer counsellors *WHO/UNICEF counseling course
	Sikander (2015)	Pakistan	Exp.: 224 Con.: 228	Cognitive behavioral counselling <i>Prenatal & Postnatal period</i> (at home) - Session 1–7: Educated by delivering an additional culturally tailored psycho- educational session integrated into the routine EBF counselling work of Lady Health Workers Control group: Only routine EBF counselling work of Lady Health Workers	During third trimester pregnancy; immediately after birth; during 1–5 month	Lady health workers *Lady Health Worker program
	Srinivas (2015)	United States	Exp.: 224 Con.: 228	Clinic based breastfeeding peer counselor intervention <i>Postnatal period</i> (at the hospital) - Session 1–9: Counselling about breastfeeding history, latching position, and milk transfer and	Within 3–5 days after birth; during 2–4,6,8,10,12 weeks & 4 month after birth	A peer counsellor * Loving Support modules: 20-h training

(Continued)

Intervention Type	Author (year)	Country	Sample Size (n)	Intervention Description	Intervention Time Schedule	Provider * Protocol for Provider Training Program
	Tahir (2013)	Malaysia	Exp.: 160 Con.: 158	offered breastfeeding support Control group: Standard of care Counselor-initiated lactation counselling intervention <i>Postnatal period</i> - Session 1-12: Counselling on lactation management via telephone Control group: Usual care of breastfeeding promotion	Twice monthly up to 6 months	Registered nurses *Lactation management and counseling course in WHO module
	Nilsson (2017)	Denmark	Exp.: 1181 Con.: 814	The parental breastfeeding program <i>Postnatal period</i> -Session 1: breastfeeding counseling (continuously during the hospital stay) -Session 2: follow up call (at home) Control group: Conventional postnatal care	During the postnatal hospitalization (first 3 days) and 24 h after discharge	Health care professionals
	Tylleskar (2011)	Burkina Faso, Uganda, South Africa	Exp.: 1323 Con.: 1256	PROMISE-EBF exclusive breastfeeding promotion intervention <i>Prenatal & Postnatal period</i> (at home) - Session 1–7 (Burkina Faso): Provided information and encouraged 6 months EBF - Session 1–5 (Uganda & South Africa): Same as Burkina Faso Control group: Burkina Faso & Uganda: Standard health care only South Africa: Visited by peer counsellors but no breastfeeding support	Once during third trimester; during 1, 2, 4, 8, 16, 20 week after birth (Burkina Faso only); during 1, 4, 7, 10 week after birth (Uganda & South Africa)	Peer counsellors *WHO training courses
Breastfeeding Education	Forster (2004)	Australia	Exp.: 656 Con.: 328	Practical skills & Attitude education <i>Prenatal period</i> (at hospital) - Session 1 (90 min): Educated lactation techniques and breastfeeding complications management <i>Prenatal period</i> (at hospital) - Session 2–3 (60 min): Educated breastfeeding benefits, and discussed expectant parents' perspectives and attitudes Control group: Standard of care	During 20–25 weeks gestation	Midwives and a community educator
	Gijsbers (2006)	Netherlands	Exp.: 58 Con.: 55	Attitude-Social influences-self-Efficacy model education program <i>Prenatal & Postnatal Period</i> (at home) - Session 1–2: Educated basic information of breastfeeding, and encouraged 6 months EBF Control group: Usual care of breastfeeding recommendations	Twice during prenatal period and once after birth	Trained research assistant **Attitude-Social influences-self-Efficacy model
	Kupratakul (2010)	Thailand	Exp.: 40 Con.: 30	Breastfeeding education & Knowledge Sharing Practices with Empowerment Strategies <i>Prenatal & Postnatal Period</i> (at home) - Session 1–9 (180 min): Educated lactation skills and shared mother's knowledge with storytelling and empowerment skills (at home) Control group: Routine standard knowledge of breastfeeding	During prenatal visits; during 1, 2 week & 1–6 months after birth	A registered nurse
	Mcdonald (2010)	Australia	Exp.: 425 Con.: 424	Extend midwifery support program <i>Postnatal period</i> (at a hospital room and home) - Session 1-18: Lactation techniques, common breastfeeding complications Control group: Standard midwifery postnatal care	During the first 6 weeks after birth	A registered midwife *BFHI
	Pound (2015)	Canada	Exp.: 50 Con.: 49	Breastfeeding support program <i>Postnatal period</i> (at Children's Hospital) - Session 1–4 (30 min): Supported by teaching breastfeeding advantages and techniques, ways to use breast pump, and storing breast milk Control group: Standard care for jaundice (fluids and phototherapy)	Once during infant hospitalization; three weekly visits after discharge	Lactation consultants *Breastfeeding Best Practice Guidelines
	Wen (2011)	Australia	Exp.: 337 Con.: 330	Home-based early intervention on infant feeding practices education <i>Prenatal & Postnatal period</i> (at home) - Session 1 (60–120 min): Breastfeeding information and appropriate timing of solids introduction Control group: 1 home visit within a month of birth if needed	At 30–36 weeks' gestation; at 1, 3, 5, 9, 12 months after birth	Community nurses * Infant Feeding Guidelines for Health Workers

Interventions	Author (Year)	Country	Exp.: Con.:	Intervention	Control	Outcomes
Combined Interventions	Aidam (2005)	Ghana	Exp.: 146 Con.: 85	Group education <i>Prenatal period</i> (at a prenatal clinic/hospital) - Session 1–2 (20 min): Educated 6 months EBF benefits, immediate breastfeeding, lactation techniques/complications Health education & counselling <i>Postnatal period</i> (at home) - Session 1–9: Advised on infant breastfeeding practices/caring Control group: Discussed on general family planning and immunization	Group education: During prenatal period Health education & counselling: At 1, 2, 4, 6, 8, 12, 16, 20, 24 week after birth	Two local nurses and a nutritionist *WHO/UNICEF breastfeeding counseling training manual: 7-day training
	Aksu (2011)	Turkey	Exp.: 30 Con.: 30	Postnatal breastfeeding education/support <i>Postnatal period</i> (at a hospital and home) - Session 1 (20–30 min): Discussed mothers' reflections on breastfeeding and encouraged to ask questions - Session 2–4 (30 min): Breastmilk expression and EBF advantages Control group: Standard breastfeeding education and support	During 24 h after birth, at 3 days & 2, 6 weeks after birth	Nurses and midwives * WHO/UNICEF breastfeeding counseling/lactation management courses: 18-hr training
	Bonuck (2006)	United States	Exp.: 188 Con.: 194	Prenatal and postnatal lactation consultant intervention <i>Prenatal Period</i> (at a prenatal clinic) - Session 1 (60 min): Educated and advised on breastfeeding - Session 2 (60 min): Educated and advised on initiating breastfeeding and expectations after birth <i>Postnatal Period</i> (either at home or hospitals) - Session 3 (60–90 min): Educated breastfeeding complication management - Additional phone calls provided as needed Control group: Standard of care	Twice during prenatal visits and once after birth	Lactation consultants *Lactation physiology and support and management of breastfeeding
	Gu (2017)	China	Exp.: 157 Con.: 128	The theory of planned behavior (TPB) based intervention <i>Postnatal period</i> (at a hospital and home) -Session 1 (60 min): Individual instruction, support and group education (at hospital) -Session 2: Telephone counseling regarding EBF problem (at home) -Session 3 (30 min): Group (mothers and their significant others) discussion on EBF (at hospital) -Session 4: Telephone support -Session 5-11: A series of telephone counseling to prepare for work (at home) Control group: Routine support from nurses in ward	Education: within the first 3 days Group session: at 6 weeks Telephone support: 2 and between 3 and 6 weeks, between 3 and 6 months	Registered nurses * Training protocol (11-h program) based on TPB model
	Kronborg (2007)	Denmark	Exp.: 780 Con.: 815	Early postnatal breastfeeding support and education <i>Postnatal period</i> (at home) - Session 1-3: Breastfeeding techniques and building mother-baby bonding Control group: Usual practice with one or more non-standardized visits	Within the first 5 weeks after birth	Registered Nurses *WHO's Training Course: 18-h training
	Su (2007)	Singapore	Exp.: 299 Con.: 151	Antenatal education <i>Prenatal period</i> (at a hospital) - Session 1 (30 min): Counsellor and educated with breastfeeding educational video Postnatal support <i>Postnatal period</i> (at a hospital) - Session 1–2 (30 min): Counsellor and educated techniques of lactation and complication management Control group: Routine pre/peri/postnatal care with no special intervention	Antenatal education: During a prenatal visit Postnatal support: Within the first 3 days after birth; first postnatal visit	A lactation consultant
Wong (2014)	Hong Kong	Exp.: 233 Con.: 236	Antenatal education and support intervention <i>Prenatal period</i> (at antenatal clinics) - Session 1 (30–45 min): Educated and supported by providing an individualized BF session Control group: Standard hospital prenatal care	During prenatal period	Registered nurse *WHO/UNICEF breastfeeding course	

Note: BFHI = Baby-friendly Hospital Initiative; BHP = Breastfeeding: Heritage and Pride; Con. = Control group; EBF = Exclusive breastfeeding; Exp. = Experimental group; FBSICG = Facility Based Semi-Intensive Counselling Group; HBICG = Home-Based Intensive Counselling Group; PROBIT = Promotion of Breastfeeding Intervention Trial; PROMISE-EBF = Promoting Infant Health and Nutrition in Sub-Saharan Africa: Safety and Efficacy of Exclusive Breastfeeding Promotion in the Era of HIV; UNICEF = United Nations Children's Fund; WHO = World Health Organization. $N = 27$.

Table 2 Subgroups effect size

Subgroups		no. of studies	Odds ratio M–H random, 95% CI	Heterogeneity
Intervention setting	Hospital	9	2.51[1.38–4.58] Z = 3.01($p = 0.003$)	$\text{Tau}^2 = 0.75$, $\text{Chi}^2 = 170.53$ $\text{df} = 8$ ($p < 0.00001$), $I^2 = 95\%$
	Community	8	2.77[1.30–5.91] Z = 2.64($p = 0.008$)	$\text{Tau}^2 = 1.02$, $\text{Chi}^2 = 125.60$ $\text{df} = 7$ ($p < 0.00001$), $I^2 = 94\%$
	Combined setting	10	3.14[1.56–6.29] Z = 3.21($p = 0.001$)	$\text{Tau}^2 = 1.00$, $\text{Chi}^2 = 94.73$ $\text{df} = 9$ ($p < 0.00001$), $I^2 = 90\%$
Provider type	Professional	17	3.59[2.27–5.68] Z = 5.46($p < 0.00001$)	$\text{Tau}^2 = 0.80$, $\text{Chi}^2 = 281.95$ $\text{df} = 16$ ($p < 0.00001$), $I^2 = 94\%$
	Lay person	10	1.63[1.06–2.50] Z = 2.25($p = 0.02$)	$\text{Tau}^2 = 0.30$, $\text{Chi}^2 = 45.51$ $\text{df} = 9$ ($p < 0.00001$), $I^2 = 80\%$
Provider protocol	Yes	22	2.87[1.89–4.37] Z = 4.93($p = 0.00001$)	$\text{Tau}^2 = 0.85$, $\text{Chi}^2 = 368.74$ $\text{df} = 21$ ($p < 0.00001$), $I^2 = 94\%$
	No	5	2.03[1.12–3.69] Z = 2.33($p = 0.02$)	$\text{Tau}^2 = 0.30$, $\text{Chi}^2 = 18.94$ $\text{df} = 4$ ($p < 0.0004$), $I^2 = 79\%$
Intervention type	Emotional support & counseling	10	2.24[1.19–4.22] Z = 2.48($p = 0.01$)	$\text{Tau}^2 = 0.85$, $\text{Chi}^2 = 147.53$ $\text{df} = 9$ ($p < 0.00001$), $I^2 = 94\%$
	Education	6	1.44[0.98–2.12] Z = 1.86($p = 0.06$)	$\text{Tau}^2 = 0.08$, $\text{Chi}^2 = 8.34$ $\text{df} = 5$ ($p < 0.14$), $I^2 = 40\%$
	BFHI	4	5.21[2.15–12.61] Z = 3.64($p = 0.0003$)	$\text{Tau}^2 = 0.78$, $\text{Chi}^2 = 97.33$ $\text{df} = 3$ ($p < 0.00001$), $I^2 = 97\%$
	Combined intervention	7	3.56[1.74–7.26] Z = 3.49($p = 0.0005$)	$\text{Tau}^2 = 0.79$, $\text{Chi}^2 = 52.60$ $\text{df} = 6$ ($p < 0.00001$), $I^2 = 89\%$
Intervention time	Pre	2	1.19[0.83–1.71] Z = 0.94($p = 0.35$)	$\text{Tau}^2 = 0.00$, $\text{Chi}^2 = 0.01$ $\text{df} = 1$ ($p = 0.94$), $I^2 = 0\%$
	Post	14	2.77[1.66–4.63] Z = 3.89($p < 0.0001$)	$\text{Tau}^2 = 0.83$, $\text{Chi}^2 = 268.69$ $\text{df} = 13$ ($p < 0.00001$), $I^2 = 95\%$
	Pre to post	11	3.32[1.83–6.03] Z = 3.94($p < 0.0001$)	$\text{Tau}^2 = 0.77$, $\text{Chi}^2 = 97.80$ $\text{df} = 10$ ($p < 0.00001$), $I^2 = 90\%$

Table 3 Assessment of Risk of Bias for Included Studies

Author (year)	Selection bias		Performance bias	Detection bias	Attrition bias	Reporting bias
	Sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective outcome reporting
Morrell, 2000	L	L	H	L	L	L
Kramer, 2001	L	L	H	H	L	L
Bhandari, 2003	L	L	H	L	L	L
Foster 2004	L	L	H	H	L	L
Aidam 2005	L	L	H	H	L	L
Coutinho 2005	L	L	L	L	L	H
Gijsbers 2006	L	U	H	U	L	L
Bonuck 2006	L	U	H	U	L	L
Kutlu 2007	L	L	U	U	L	L
Su 2007	L	L	U	U	L	L
Kronborg 2007	L	L	U	L	H	L
Kupratkul, 2010	L	L	U	U	L	L
Mcdonald, 2010	L	L	U	U	L	L
Aksu, 2011	L	U	U	U	L	L
Tylleskar, 2011	L	L	L	U	L	L
Wen, 2011	L	L	L	L	L	L
Ochola, 2012	L	H	H	L	L	U
Jolly, 2012	U	U	U	L	U	L
Tahir and Al-Sadat (2013)	L	H	H	L	L	L
Chapman, 2013	L	U	U	H	U	L
Wong 2014	L	L	H	L	L	L
Pound 2015	L	L	L	L	L	L
Srinivas 2015	U	U	U	L	U	U
Yotebieng 2015	L	L	L	L	H	L
Nilsson 2016	L	U	H	L	L	L
Sikander 2016	U	H	H	L	L	L
Gu 2017	L	L	L	L	L	L

Note: H: high risk of bias; L: low risk of bias; U: unclear risk or bias.

Fig. 2 Breastfeeding promotion intervention versus standard care outcome 6 month EBF.

