

# Lay Peer Support in Breastfeeding Interventions: Examining Engagement Strategies

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# Presentation Outline

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- Background
- Study Objectives
- Systematic Review Procedures
- Results
- Discussion

# Breastfeeding Background

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- Most important preventive intervention for short term child survival and long term child development
  
- Strategies to promote breastfeeding:
  - Setting standards for maternity services
  - Community education through media campaigns
  - Lay peer led initiatives to support individual mothers

# Lay Peer Support Background

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- Knowledge and experience of a certain health concern or stressor, a similar demographic background, and shared community network uniquely position lay peer supporters (LPS) to provide socially relevant care and assistance
- Significant contributions to the field of health promotion

# Lay Peer Support + Breastfeeding

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- Studies have found mixed results
- Possible explanations for variability in the effectiveness of peer support on breastfeeding outcomes:
  - Peer support model
  - Breastfeeding norms
  - Contact modalities
  - Engagement?

# Lay Peer Support + Breastfeeding

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## Graffy 2004

- **Context:** England, Urban
- **Study:** Randomized intervention to increase breastfeeding via antenatal in-person visits plus post-natal phone calls on request (n= 720)
- **Results:** No differences in self reported % breast feeding initially or at 4 or 6 months post-partum

## Muirhead 2006

- **Context:** Scotland, Rural
- **Study:** Randomized intervention to increase breastfeeding via antenatal in-person visits plus post-natal phone calls or in-person visits on request (n= 225)
- **Results:** No differences in self-reported breastfeeding initiation or duration at 10 days, 8 weeks or 16 weeks post-partum

# Study Objectives

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1. Identify studies that utilized LPS to deliver breastfeeding interventions;
2. Document the type of engagement strategies utilized by LPS; and
3. Examine the relationship between the identified engagement strategies and the overall effectiveness of the intervention

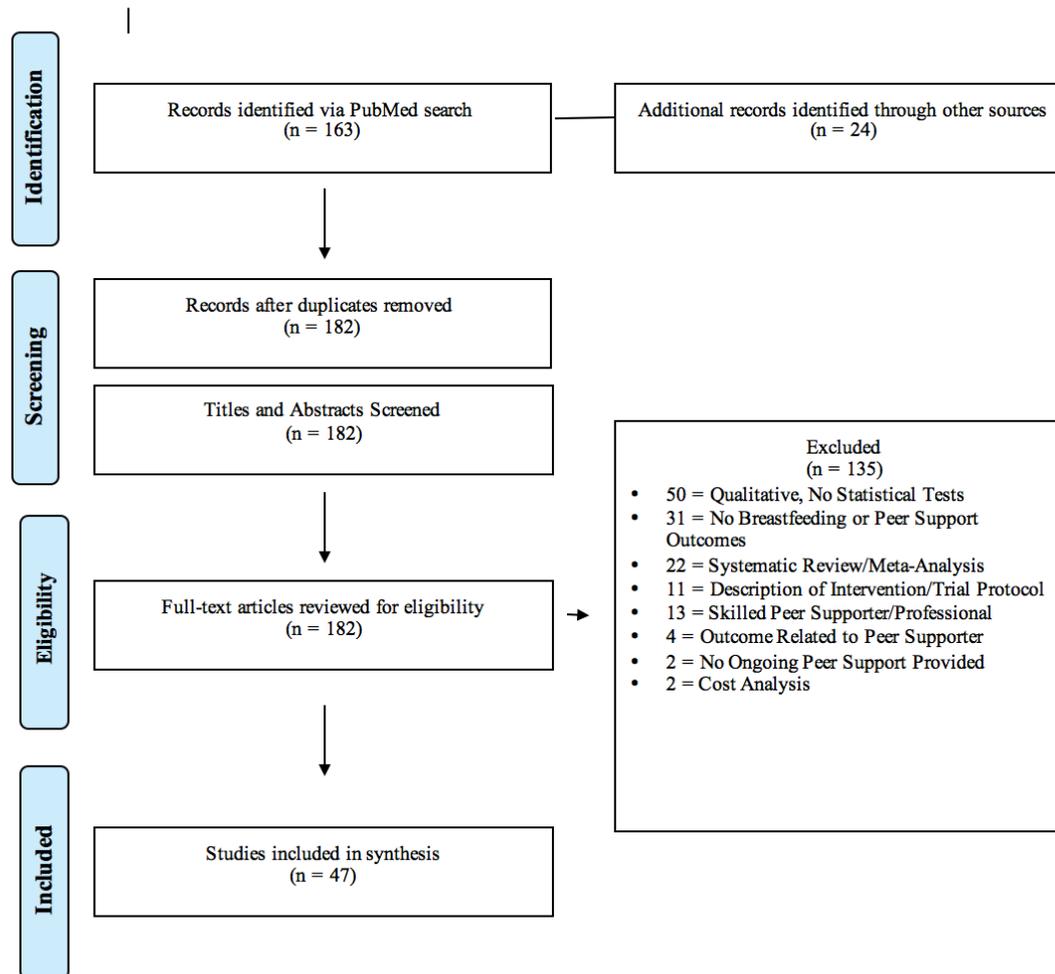
# Systematic Review

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- PubMed Search:
  - Abstracts and Titles from 1995-2015
  - Cognates of lay peer supporter titles (community health worker, natural helper, *promotora*, etc.)
  - Cognates of breastfeeding
- Eligibility Criteria:
  - Inclusion of only lay peer supporters in the intervention
  - Measurement of either initiation, exclusivity, or duration of breastfeeding
  - Inclusion of statistical tests of significance for observed changes

# Results

Figure 1. PRISMA Diagram



# Systematic Review - Study Characteristics

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- Abstraction:
  - Study country context (high vs. low income)
  - Study country setting (rural and urban)
  - Sample size
  - Retention of study participants

# Systematic Review - Intervention Delivery Characteristics

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- Abstraction:
  - Type of peer supporter
    - Background and training
  - Engagement modalities
    - Telephone, mailed flyer, home visit, clinic visit, etc.
  - Utilization of engagement strategies:
    - Any face-to-face contact
    - Initiation of engagement (peer supporter vs. mother)
    - Timing of initiation of engagement (hours till follow up after birth)
    - Overall timing of engagement (prenatal and postnatal)

# Systematic Review – Outcomes

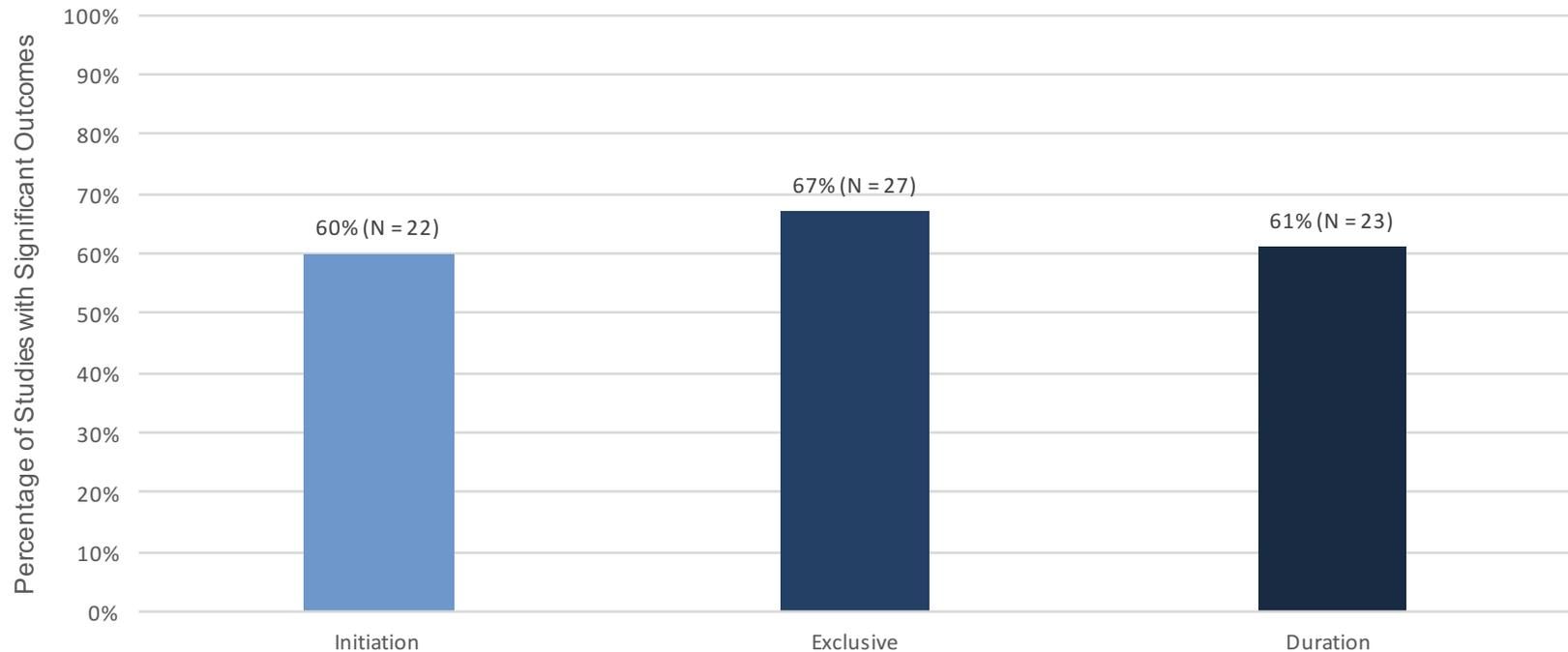
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- Abstraction:
  - Initiation of Breastfeeding
    - Infant receives milk within the first 24 hours of birth.
  - Exclusive Breastfeeding
    - Maternal milk as the only food source with no other liquids or food given except medicines, minerals, and vitamins.
  - Duration of Breastfeeding
    - Duration that an infant or child receives breast milk

# Results

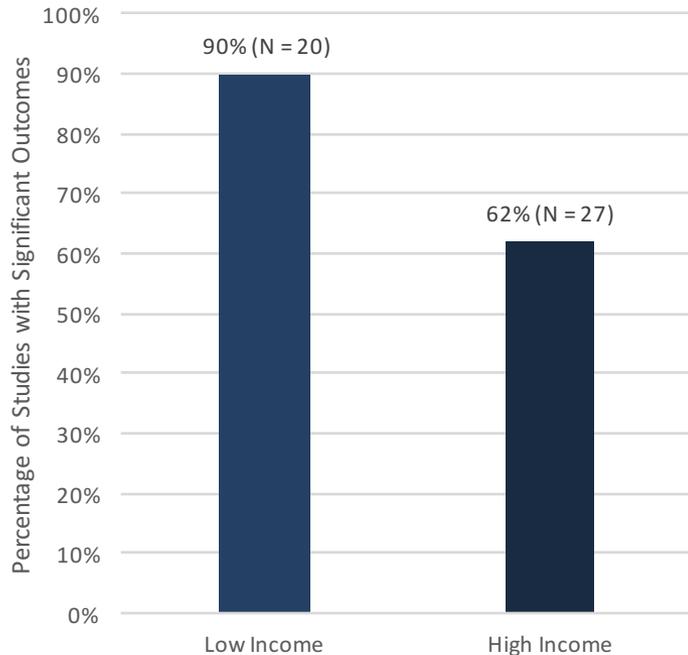
35 out of 47 studies reported significant differences between intervention and control groups (**significant outcomes**)

Studies with Significant Outcomes Disaggregated by Breastfeeding Outcome



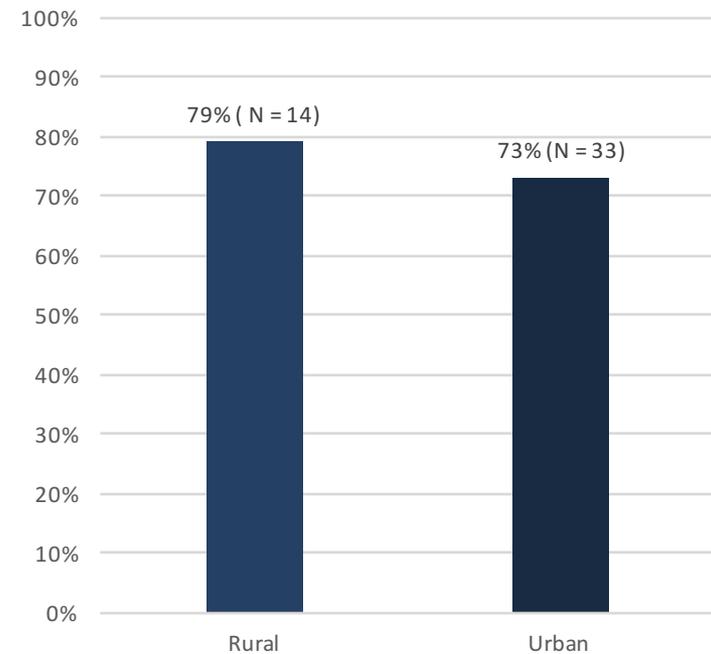
# Results: Impact of Peer Support by Setting

Proportion of Studies with Significant Outcomes by Country Income



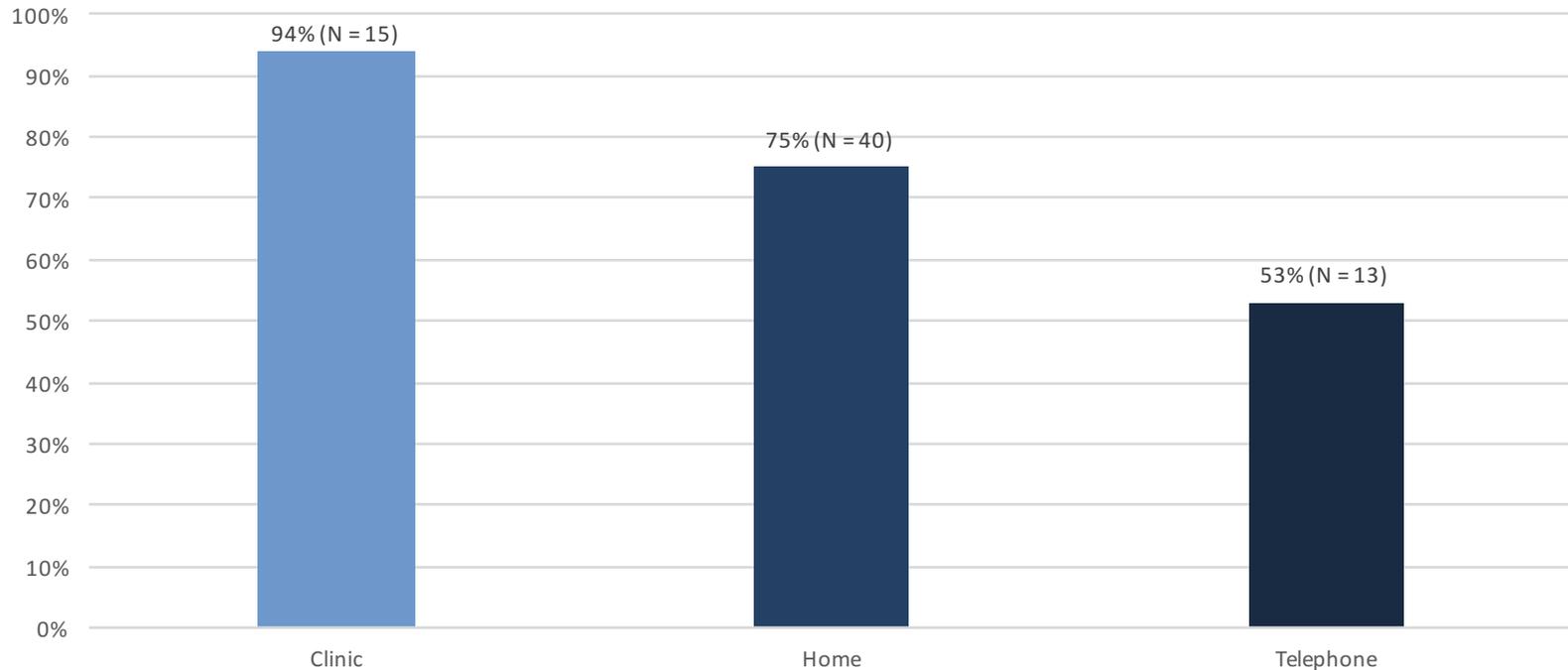
Significant difference by country income (Fisher's Exact = 0.036)

Proportion of Studies with Significant Outcomes by Intervention Context



No significant difference by intervention context (Fisher's Exact = 0.674)

# Results: Impact of Peer Support by Modality



**Significant** difference between studies that utilized clinic contact versus those that did not (Fisher's Exact = 0.04)

Non-significant difference between studies that utilized home contact versus those that did not (Fisher's Exact = 0.04)

**Significant** difference between studies that utilized telephone contact versus those that did not ( $\chi^2 = 1.02$ , p-value = 0.04)

# Results: Impact of Peer Support by ES

**TABLE 2 Association between Type of Engagement Strategy Used and Significant Outcomes Disaggregated by Type of Outcome**

Breastfeeding Outcome	Total Studies Measuring Outcome	Total Studies with Significant Outcome	Face to Face Peer Support	Contact by Peer Supporter within 72 hours of delivery	Initiation of Contact by Peer Supporter	Contact with Peer Supporter Before and After Birth
	N	N	Fisher's Exact	Fisher's Exact	Fisher's Exact	Fisher's Exact
Initiation	22	13 (60%)	0.1558	0.0260*	0.1778	0.6161
Exclusive	27	18 (67%)	0.295	0.2365	0.0297*	Equal
Duration	23	14 (61%)	0.2601	0.4003	0.0183*	Equal
All Outcomes	47	35 (74%)	0.0971	0.0161*	<.0001*	0.7441

\* p-value < .05\*

**TABLE 5 Odds of Significant Outcomes by Number of Strategies Utilized**

Breastfeeding Outcome	Odds Ratio (Model 1)	Odds Ratio (Model 2)
Initiation	2.48	1.52
Exclusive	3.09*	2.56*
Duration	3.89*	5.59*
All Outcomes	4.50**	3.59*

\* p-value < .05, \*\* p-value < .01

# Results: Influence of Follow Up Duration

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- Differences in how the outcomes were measured in each study
  - Initiation of breastfeeding consistently measured within 24 hours of birth
  - Measurement of duration and exclusive outcomes ranged from 1 to 24 months.
- There were a greater number of studies achieving significant breastfeeding outcomes at the three-month measurement period than at the six-month measurement period.
- The association between number of significant outcomes and time at last follow up across all outcomes was not statistically significant (Fisher's Exact = 0.684).

# Discussion

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1. Proactive engagement matters. Rather than any single strategy or specific combination of strategies, just using more strategies, or more engagement, was associated with significant breastfeeding outcomes.
2. Peer support might be more effective for interventions that promote exclusive breastfeeding or longer duration of breastfeeding.
3. Context is important – intervention modality and country income level.

# Strengths, Limitations, & Future Steps

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## Strengths:

- First study to document and examine proactive engagement strategies
- Analysis in addition to a systematic review

## Limitations

- Variability in the timing of which breastfeeding outcomes were measured.
- Studies assessed more than one breastfeeding outcome, increasing the probability of reporting significant results.
- Analysis was largely descriptive, no calculation of effect size.
- Findings are contingent upon the quality of studies included in our review.

## Areas for future research:

- Pathways through which intervention context impacts peer support effectiveness
- Data on engaging mothers in peer support interventions related to engagement dose
- Qualitative work on additional facets of engagement



# Acknowledgements

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Thank you!

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# Results

**TABLE 1 Disaggregation of Studies by Key Characteristics and Significant Outcomes**

	Total Studies with Characteristic	Studies with Characteristic and Any Significant Outcome	Studies with Characteristic and Significant Initiation Outcome	Studies with Characteristic and Significant Exclusive Outcome	Studies with Characteristic and Significant Duration Outcome
	N = 47	N (%)	N (%)	N (%)	N (%)
<b>Modality</b>					
Clinic Only	2	2 (100%)	0	0	2 (100%)
Home Only	21	16 (76.19%)	7 (77.78%)	11 (73.33%)	3 (50%)
Telephone Only	4	2 (50%)	0 (0%)	2 (50.00%)	1 (33.33%)
Clinic and Telephone	1	1 (100%)	0	1 (100%)	0
Home and Clinic	11	10 (90.91%)	3 (60%)	4 (100%)	5 (100%)
Home and Telephone	7	3 (42.86%)	2 (33.33%)	0 (0%)	3 (42.86%)
Home, Telephone, and Clinic	1	1 (100%)	1 (100%)	0	0
<b>Country Context</b>					
High Income	27	17 (62.96%)	7 (46.67%)	5 (38.46%)	10 (55.56%)
Low to Middle Income	20	18 (90.00%)	6 (85.71%)	14 (92.86%)	4 (80.00%)
<b>Geography</b>					
Rural	14	11 (78.57%)	4 (66.67%)	7 (87.50%)	5 (83.33%)
Urban	33	24 (72.73%)	9 (56.25%)	11 (57.89%)	9 (52.94%)
<b>Time of Last Follow-Up</b>					
Less than 3 Months	18	14 (77.78%)	10 (71.43%)	3 (60.00%)	3 (50.00%)
3 Months	15	12 (80.00%)	1 (25.00%)	8 (88.89%)	8 (80.00%)
6 Months	11	7 (63.64%)	2 (50.00%)	6 (54.55%)	2 (40.00%)
Greater than 6 Months	3	2 (66.67%)	0	1 (50.00%)	1 (100%)
<b>Total</b>	<b>47</b>	<b>35 (74.44%)</b>	<b>13 (27.66%)</b>	<b>18 (32.30%)</b>	<b>14 (29.79%)</b>
<b>Engagement Strategy Utilized*</b>					
Face-to-Face	42	33 (78.57 %)	13 (65.00%)	16 (72.73%)	13 (68.42%)
Initiation	38	34 (89.47%)	11 (68.75%)	17 (77.27%)	13 (76.47%)
Pre & Post Contact	29	21 (72.41%)	10 (55.56%)	9 (64.29%)	7 (58.33%)
Contact within 72 hours of birth	27	24 (88.89%)	11 (78.57%)	11 (78.57%)	8 (72.73%)
<b>Breastfeeding Outcome Measured*</b>					
Initiation	22	13 (60%)	-	-	-
Exclusive	27	18 (67%)	-	-	-
Duration	23	14 (61%)	-	-	-

\*Studies could be placed in more than one category