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## Proactive telephone-based peer support for breastfeeding: a cross-sectional survey of women's experiences of receiving support in the RUBY randomised controlled trial

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2020-040412
Article Type:	Original research
Date Submitted by the Author:	13-May-2020
Complete List of Authors:	McLardie-Hore, Fiona; Royal Women's Hospital, Midwifery and Maternity Services Research; La Trobe University, Judith Lumley Centre McLachlan, HL; La Trobe University, Judith Lumley Centre; La Trobe University, School of Nursing and Midwifery Shafiei, Touran; La Trobe University, Judith Lumley Centre Forster, Della; La Trobe University, Judith Lumley Centre; Royal Women's Hospital, Maternity Services
Keywords:	PUBLIC HEALTH, Maternal medicine < OBSTETRICS, EPIDEMIOLOGY

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# Proactive telephone-based peer support for breastfeeding: a cross-sectional survey of women's experiences of receiving support in the RUBY randomised controlled trial

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**Word count:** 4684

**Abstract:** 296

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**ABSTRACT**

**Objective** The RUBY randomised controlled trial (RCT) of proactive telephone-based peer support for breastfeeding found that infants of women allocated to the intervention were more likely to be receiving breast milk at six months of age than those receiving usual care. This paper describes women’s experiences of receiving the RUBY peer support intervention.

**Design** Cross-sectional survey

**Setting** Women were recruited from the postnatal units of three tertiary hospitals in Melbourne, Australia.

**Participants** Women allocated to receive telephone peer support in the RUBY RCT who completed a telephone interview at six months postpartum (501/574 [87%] in trial intervention arm) were invited to complete a postal survey on their experience of receiving support.

**Outcomes** Experiences of support from the allocated peer, perceived helpfulness, topics discussed, overall satisfaction with the support, and frequency and duration of contact were explored.

**Results** Surveys were sent between August 2013 and March 2016, and 72% (360/501) responded of whom 341 recalled receiving peer support. Women reported high levels of perceived helpfulness (79%) and overall satisfaction with the peer support (93%). Discussions included breastfeeding topics (milk supply, attachment), baby care, baby behaviour, and reassurance and emotional support. Women valued the practical and realistic support from another mother, as well as the proactive nature, continuity and accessibility of the support. The empathy, reassurance and encouragement provided helped the mothers to ‘cope’, to continue breastfeeding, and to feel empowered.

**Conclusion** Most respondents were positive about their experience of receiving proactive telephone peer support for breastfeeding, further supporting the roll-out of this model as a strategy for increasing breastfeeding maintenance to six months. Recommendations include flexibility in the scheduling of calls according to individual need, and the use of text messages in conjunction with proactive calls, to enhance and facilitate communication between the peer and the mother.

**Keywords** breastfeeding, telephone, peer support

**Trial registration:** ACTRN12612001024831

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- This study had a high response rate of 72% (360 participants) and includes both quantitative and qualitative data
- Given the primary outcome of the RUBY RCT demonstrated a positive effect on breastfeeding at six months, this study provides further insight into participants' experience of the intervention which will inform and support implementation and sustainability of a telephone peer support intervention model
- The 18% of women who did not respond were less likely to be breastfeeding at six months, compared to responders, and may have had different experiences.

## INTRODUCTION

### Background

Despite the significant health and economic benefits of breastfeeding<sup>1 2</sup> effective strategies to increase breastfeeding maintenance in high-income countries have proven complex. Breastfeeding duration in most high-income countries remains shorter compared to low-income countries<sup>2</sup> and shorter than the World Health Organization recommendations.<sup>3</sup> Increasing the rates of breastfeeding worldwide is fundamental to achieving the United Nations Sustainable Development

Goals by 2030.<sup>4</sup>The most recent Cochrane review on support for healthy breastfeeding mothers and healthy term babies found evidence of the value of face-to-face support from health professionals to increase breastfeeding <sup>5</sup>, however this is an expensive option at a population level, particularly if the intervention needs to be maintained for up to six months postpartum. Programs of peer support for breastfeeding, whilst less costly than professional support, have varied greatly in their timing, mode of delivery, and length of support, producing mixed results, with the more effective programs being in low-income settings.<sup>5</sup>

Telephone peer support is another potentially effective, sustainable and cost-effective intervention, however the Cochrane review found no association between (predominantly) telephone peer support and increased breastfeeding maintenance.<sup>5</sup> Since that review, a large Australian RCT of 1152 women 'Ringing up about breastfeeding' (RUBY) found a positive association between receiving proactive (volunteer) peer support by telephone, and an increase in any breastfeeding at six-months postpartum (intervention 75%, usual care 69%).<sup>6</sup> Conducted between 2013 and 2016, participants in the RUBY trial were first time mothers, recruited after birth, prior to discharge from hospital. Women allocated to the intervention arm of the trial received standard postnatal care and breastfeeding support in hospital and in the community, along with proactive telephone-based support from an allocated peer volunteer, who had themselves breastfed for at least six-months, and who received four hours of training.<sup>7</sup> For those allocated to the intervention, the peer calls were scheduled twice in the first week after birth, weekly until 12 weeks postpartum and then three to four weekly until six-months postpartum, with the participant able to contact the peer between scheduled calls. The calls focused on the mother's breastfeeding experience as well as mother and infant wellbeing, with peers referring mothers to additional services as needed. More detail is available in the study protocol.<sup>7</sup>

Proactive telephone support, provided by women who have themselves breastfed for at least six months, is an intervention that is potentially well suited for scale-up in many countries, with pre-existing consumer-led breastfeeding associations a possible base for such an intervention. Most of these organisations currently require women to actively seek the support themselves. Whilst this

1 may be of great benefit to the many women who actively engage with these organisations, it is not  
2 necessarily the best option for women who wish to breastfeed but are less motivated or have lower  
3 self-efficacy. Women whose infants are likely to benefit most from breastfeeding support are the  
4 least likely to access it.<sup>5 8</sup> It is for these reasons the proactive telephone support model is potentially  
5 a powerful and scalable intervention at a population level.  
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11 It is imperative for organisations implementing a proactive peer support intervention for  
12 breastfeeding to understand the consumer experience to ensure programs are acceptable,  
13 accessible, responsive and provide improved outcomes.<sup>9</sup> Current literature describing mothers'  
14 experiences of proactive breastfeeding support programs is mainly limited to a few relatively small  
15 studies in Sweden<sup>10</sup> (proactive, telephone-based professional support), the United Kingdom<sup>11-13</sup>  
16 (predominantly face to face peer support models) and Australia<sup>14 15</sup> (mixture of peer/professional  
17 support face to face). Dennis'<sup>16 17</sup> Canadian study of the effect of proactive telephone-based peer  
18 support on breastfeeding, on which the RUBY study was based, reports maternal experiences  
19 including high rates of overall satisfaction and satisfaction with 'enough peer contact to help them  
20 with breastfeeding'. Given the paucity of literature reporting how, and what women experience in a  
21 proactive telephone-based peer support model, this paper presents the findings of a cross-sectional  
22 study of mothers receiving the intervention in the RUBY RCT.  
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## 40 Rationale

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43 A key aim of the RUBY trial was to evaluate the interventions from the participant perspective.<sup>7</sup> In a  
44 model of proactive telephone-based peer support, which produced positive breastfeeding  
45 outcomes, it is important to understand how, and what, supportive interactions the participants  
46 experienced and their views of this support.  
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## 53 METHODS

### 54 Study design

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All women in the intervention arm of the RUBY RCT who completed the six-month telephone interview were invited to complete a postal survey, which was specifically designed to explore their experiences of receiving peer support.

**Patient public involvement**

Representatives of the Australian Breastfeeding Association (<https://www.breastfeeding.asn.au/>), the peak breastfeeding advocacy group in Australia, were members of the RUBY research team and were involved in the design of the survey and training of the peer volunteers.

**Data collection**

Data collection for the RUBY study occurred at three time points; face to face at recruitment, by telephone at six months post birth, and by postal survey (intervention group only) following the six-month interview. <sup>7</sup> Participant characteristics, breastfeeding intention, mothers’ perceptions of family views of her breastfeeding plans, and perceived level of family and friends support for breastfeeding were collected at recruitment. Infant feeding outcomes were collected at the six-month interview. Women allocated to the intervention (n=574), and who completed the six-month interview (n=501), were sent a postal survey between August 2013 and March 2016 which explored their views and experiences of telephone support. Following the initial invitation, a reminder letter and a second invitation to complete the postal survey were sent to non-responders at three and six weeks respectively.

Women were asked to respond to a series of questions regarding the frequency and average length of the calls from their peer, the period over which the support was received, other type of contact with their peer, and topics discussed during the calls. Participants were also asked to describe how helpful they found the calls on a five-point Likert-type scale where 1 = ‘Not at all helpful’ and 5 ‘Very helpful’. After the first 207 surveys had been sent, it was decided to also add a validated tool to gain a broader understanding of why the peer support may have been helpful (if it was). The ‘Peer Support Evaluation Inventory’ (PSEI) <sup>18</sup> was chosen as being a good fit, however following ethics

review and advice, in order to minimise respondent burden, it was decided that only three of the original four most relevant subscales of the PSEI would be used. The instructions for the PSEI specifically state that each subscale of the PSEI can be used independently. We therefore chose to use: Mother's perceptions of supportive interactions, Maternal satisfaction with support received, and Maternal perceptions of relationship qualities. We did not include Maternal perceptions of perceived benefits. The self-report tool invites participants to respond to a series of statements to evaluate the mother's perceptions of supportive interactions, relationship qualities, and satisfaction with the support experience using a five-point Likert-type scale from 1= 'Strongly disagree' to 5= 'Strongly agree'.

## Data analysis

Survey responses were entered onto Redcap and downloaded to STATA Statistical Software 14 (Statacorp.,2015) for data cleaning and analysis. Participant characteristics, breastfeeding plans and perception of support for breastfeeding were analysed using descriptive statistics, frequencies and percentages. The responses to the PSEI were dichotomised into 'Agree' (score 4= 'Agree' or 5= 'Strongly agree') or 'Disagree' (score 1='Strongly disagree' to 3= 'Unsure') and subsequently analysed using frequencies and percentages. Overall mean was calculated for the positive scales of 'perceptions of supportive interactions' and 'satisfaction with support received'. Means were not calculated for the scale 'perceptions of relationship qualities' or .... because both domains contained some items which could be interpreted differently (positively or negatively) e.g. 'I depended on my peer' maybe be viewed as positive by some, but no others, thus an overall mean may not clearly indicate participant perceptions, thus we considered it inappropriate to reverse score these items. Content analysis was used for open-ended, short answer responses to questions about positive and negative aspects of calls, with codes derived from the text and organised into categories and then themes.<sup>19</sup>

Longer open-ended responses were thematically coded using the Attride-Stirling analytic tool <sup>20</sup> with basic themes systematically abstracted from the data and grouped into similar categories (organising

themes). Inductive analysis of these organising themes provides greater understanding of the overall meaning of the data through the development of global themes. The basic, organising and global themes were discussed between research team members (FMcL, HMcL) at each stage and consensus reached. Direct quotes from participants were used to illustrate the themes, with quotes acknowledged by participant identification number, age, length of breastfeeding (bf) in months, length of peer support (ps) in months, and country of birth.

RESULTS

Participants

In total 360 of the 501 (72%) women sent a postal survey responded. Of these, 341 stated that they had received calls from a peer, whilst 19 women stated they did not receive the calls and subsequently did not complete any further responses. These 19 women are therefore included in Table 1 only. Table 1 describes the characteristics of respondents, including women’s perceptions of breastfeeding support from family and friends. Over half the participants were born in Australia, with most speaking English as a first language. Of those born overseas, China, India, and the United Kingdom were the most frequently reported country of origin, with 48 other countries of birth reported. At recruitment, women were asked to rate the level of breastfeeding support they perceived they had from family and friends, with the majority of participants responding, ‘A lot of support’ (73%).

Women who did not respond to the survey were less likely than respondents to have a degree (non-responders 50% to responders 71%), more likely to have a pension or benefit as their main income (non-responders 13% to responders 3%), be born overseas (non-responders 61% to responders 47%), and less likely to be giving their baby any breast milk (non-responders 59% to responders 81%) or only breast milk at six months (non-responders 37% to responders 60%).

Table 1: Participant

At recruitment to RUBY RCT	Respondents (n=360)	
Maternal age at recruitment to RCT (years) mean (SD)	31.9	4.6 (sd)

	n	%
Married or living with partner	349	96.9
Education level graduate degree or higher	256	71.3
Household weekly income pre-tax (\$AUD)		
Less than \$1400	83	23.0
\$1400 or more	243	67.5
Declined to answer	34	9.4
Pension or benefit n=359	10	2.8
Born in Australia	192	53.3
English as first language	245	68.1
Smoked pre-pregnancy	37	10.2
Caesarean birth	95	26.4
Baby gestation at birth (weeks) mean (SD)	39.6	1.2(sd)
Birthweight (grams) mean (SD)	3401.7	445.7(sd)
Baby admitted to neonatal/special care nursery	24	6.7
Baby had formula since birth, prior to recruitment to RUBY RCT	62	17.2
Plans to breastfeed 6 months or more	281	78.1
Level of breastfeeding support from family and friends		
No support	4	1.1
A little support	33	9.2
Moderate support	62	17.2
A lot of support	261	72.5
<b>Breastfeeding outcomes at 6-month interview</b>		
Any breast milk	293	81.4
Only breast milk (may include solids)	216	60.0

### Peer support contacts

Of the 360 returned surveys, 341 (95%) participants reported receiving one or more contact/s from their peer. Table 2 shows the peer support contact frequency and duration reported by participants.

Over half the women (56%) received weekly calls from their peer in the first three months after birth, as per the planned schedule of calls, with 17% receiving less frequent calls and 20% reporting the call frequency varied. Between three and six months, 42% of women received calls second weekly or more often, 27 % received monthly calls and 33% reported calls varied. Most (85%) reported the frequency of calls was 'About right', with only 5% reporting they were 'Not often enough'. Approximately one third of women reported that the length of calls was 6-10 minutes on average, and another third reported they were 11-20 minutes. Asked 'When did the calls from the volunteers stop?' over half the women reported ceasing prior to 26 weeks, 32% stated *at* 26 weeks (as per the intervention schedule), and 14% reported after 26 weeks. In terms of who decided to

stop the calls, 38% of women ‘Agreed together’ with the peer, 22% stated the ‘Peer decided’, and 19% said ‘I decided’.

Other contact with their peer

Approximately 40% of respondents (n=137/ 335) had called their peer (reactive contact) between the scheduled calls, and 63%(n=215/341) made contact in other ways, mostly by text message (n=201/215, 93%). When asked the reasons for initiating contact, participant’s responses included ‘returning or rescheduling a call’ (n=113/213, 53%), for ‘breastfeeding advice’ (n=58/213, 27%) or to ‘touch base and update progress’ (n=35/213, 16%). Responding to how many contacts they initiated, most commonly women initiated only one (n=38/188,20%) or two contacts (n=54/188, 29%) themselves.

**Table 2: Frequency and duration of contact with peer volunteer**

<b>On average how often did you receive calls from your volunteer in the first 3 months? n=341</b>	<b>n</b>	<b>%</b>
Twice weekly	22	6.5
Weekly	192	56.3
2nd weekly	53	15.5
Monthly	5	1.5
It varied	69	20.3
<b>On average how often did you receive calls from your volunteer after the first 3 months? n=331</b>	<b>n</b>	<b>%</b>
Twice weekly	8	2.5
Weekly	38	11.6
2nd weekly	90	27.5
Monthly	87	26.6
It varied	108	32.5
<b>How did you feel about the frequency of calls you received? n=332</b>	<b>n</b>	<b>%</b>
About right	283	85.3
Too often	33	9.9
Not often enough (I would have liked more calls)	16	4.8
<b>On average how long did these calls last? n=332</b>	<b>n</b>	<b>%</b>
0-5 minutes	43	13.0
6-10 minutes	105	31.6
11-20 minutes	108	32.5
Longer than 20 minutes	44	13.3
It varied	32	9.6
<b>When did the calls from your volunteer stop (in weeks)? n=317</b>	<b>n</b>	<b>%</b>
1	2	0.6
2- 4	27	8.5
5 - 8	28	8.8
9-12 weeks	15	4.7
13-16 weeks	35	11.0
17 – 20 weeks	30	9.5
21 – 25 weeks	35	11.0
26	100	31.5

Greater than 26 weeks	45	14.2
<b>If the calls stopped who decided to stop the calls? n=295</b>	n	%
We agreed together	111	37.6
Volunteer decided	64	21.7
I decided	57	19.3
Don't remember	48	16.3
Other	15	5.1
<b>Did you ever call the volunteer yourself? n=335</b>	n	%
Yes	137	40.9
<b>Did you ever contact the volunteer yourself in another way? n=341</b>	n	%
Yes	215	63.0
<b>Other type of contact n=215</b>		
Text message	201	93.4
Email	12	5.6
Other (e.g. Facebook, WhatsApp, WeChat, Post)	12	5.6
<b>If you contacted your volunteer, can you recall the number of times? n=188</b>	n	%
1	38	20.4
2	54	29.0
3	30	16.1

<b>What things did you talk about with your peer volunteer? n=341</b>	n	%*
Milk supply	259	76.0
Baby behaviour	251	73.6
Baby attaching to the breast	246	72.1
Reassured me	245	71.9
Nipple or breast pain	211	61.9
Advised me where to get help	207	60.7
Lack of sleep	195	57.2
How often to feed my baby	190	55.7
Baby sleep/wake patterns	187	54.8
Gave me emotional support	185	54.3
Settling my baby	161	47.2
Baby care	161	47.2
My emotional wellbeing	145	42.5
Support from my family	124	36.4
Other	47	13.8
4	8	4.3
5	30	16.1
6 - 20	26	14.1

### Topics discussed with peer volunteer

Participants were asked 'What things did you talk about with the volunteer mother?', selecting from a number of pre-specified topics. 'Milk supply' (76%) was the most frequent response, with 'Baby behaviour' (74%) and 'Baby attaching to the breast' (72%) the next most frequent (Table 3).

**Table 3: Topics discussed with peer volunteer**

Positive and negative aspects of calls

Women were asked how helpful they would describe the telephone support they received overall, on a scale of ‘1’ (Not at all helpful) to ‘5’ (Very helpful), and 79% (n=261/330) of participants responded ‘Helpful’ to ‘Very helpful’, 12% responded ‘3’ and 9% ‘1’ to ‘2’ (Not helpful). Asked to respond to the question “Did you find anything particularly positive (Helpful) about these calls?” 87% (n=286/328) of participants responded ‘Yes’. Further to this, 279 completed an open-ended response to describe what was positive. Content analysis was undertaken. Themes included having another mother knowing what she was going through (23%), receiving advice and guidance (15%), reassurance (13%) and that the peers were friendly and easy to talk to (13%).

Women were also asked to respond to “Did you find anything negative (not helpful) about these calls?” and 15% (n=48/331) responded ‘Yes’. Content analysis of these responses included there was limited advice (17%), difficulty finding time for the call (15%) and nothing to talk about (15%).

Peer Support Evaluation Inventory

The three subscales of the Peer Support Evaluation Inventory<sup>18</sup> used to further understand the mothers’ experience of support included ‘Mother’s perceptions of supportive interactions’, ‘Maternal satisfaction with support received’ and ‘Maternal perceptions of relationship qualities’, with statements grouped under common domains. (Table 4)

Table 4: Peer support evaluation inventory

Maternal perceptions of supportive interactions			
Domain	Subscale item	Agree – Strongly agree	
		n	%
Emotional support		mean	92.8%
	Listened to me talk about my feelings or concerns (n=152)	146	96.0
	Helped me feel that I was not alone in my situation (n=151)	143	94.7
	Expressed interest and concern about how I was doing (n=152)	144	94.7
	Told me that help was available when I needed it (n=152)	138	90.8
	Accepted me for who I was (n=152)	133	87.5
Informational support		mean	86.5%
	Provided me with practical information (n=152)	142	93.4
	Gave trustworthy advice (n=152)	139	91.4
	Assisted me to solve my problems or concerns (n=151)	134	88.7
	Told me what was usual for my current situation (n=151)	129	85.4
	Suggested other ways of doing things (n=150)	126	84.0
	Told me what to expect in a certain situation (n=152)	115	75.6

Appraisal support			mean	86.1%
		Helped me feel that what I was going through was 'normal' (n=151)	144	95.4
		Told me that I did something well (n=152)	134	88.2
		Gave me feedback on how I was doing (n=149)	130	87.2
		Expressed admiration for a personal quality of mine (n=151)	111	73.5
<b>Maternal satisfaction with support received</b>				
Domain	Subscale item		Agree-Strongly agree n %	
General satisfaction			mean	82.5%
		Overall, I am satisfied with my peer support experience (n=151)	140	92.7
		I would recommend this type of support to a friend (n=152)	135	88.8
Perceived quality			mean	82.3%
		My peer was respectful to me (n=151)	145	96.0
		I liked my peer (n=152)	141	92.8
		My peer provided the assistance I needed (n=152)	127	83.6
		My peer met my expectations (n=152)	123	80.9
		There is nothing I would have liked done differently (n=148)	109	73.6
		For my situation one-to-one support was better than group support (n=149)	100	67.1
Convenience			mean	80.3%
		I liked the support over the telephone (n=152)	129	84.3
		Receiving support from my peer was convenient for me (n=151)	122	80.8
		I had very few problems with the support I received (n=149)	112	75.2
Access			mean	84.1%
		My peer telephoned when planned (n=149)	127	85.2
		I was able to talk to my peer when I needed to (n=149)	126	84.6
		I had enough contact with my peer (n=149)	123	82.6
<b>Maternal perceptions of relationship qualities</b>				
Theoretical perspective	Domain	Subscale item	Agree-Strongly agree n %	
Perceived peer responsiveness	Intimacy	If something important happened to me I could share the experience with my peer (n=152)	122	81.9
		I knew that whatever I said was just between us (n=152)	116	76.3
		My peer could tell when I was worried about something (n=152)	83	54.6
	Trust	I knew my peer would respond to me in a supportive way (n=152)	139	91.4
		My peer was trustworthy (n=149)	131	87.9
		My peer was dependable (n=151)	126	83.4
	Perceived acceptance	I felt accepted by my peer (n=151)	137	90.7
		I felt comfortable "just being myself" with my peer (n=152)	132	86.8
		With my peer I could confide my most inner feelings (n=150)	95	63.3
	Empathy	My peer understood my point of view (n=152)	132	86.8
		My peer felt bad if things didn't go well for me (n=152)	108	71.1
Nature and	Attachment	I felt comfortable getting close to my peer (n=151)	101	66.9

extent of interdependence		I depended on my peer (n=150)	39	26.0
	Close	I felt close to my peer (n=152)	90	60.5
		My peer influenced how I felt or acted (n=150)	82	54.7
Peer qualities	Commitment	My peer invested time to help me (n=152)	129	84.9
		My peer worked at maintaining a relationship with me (n=151)	121	80.1
		My peer was an important source of support for me (n=151)	108	71.5
		I looked forward to talking with my peer (n=152)	107	70.4
	Social competence	My peer presented a good first impression (n=151)	142	94.0
		My peer was interesting and enjoyable to talk to (n=151)	137	90.7
		My peer revealed personal information (n=149)	78	52.3
	Social skills	My peer was sensitive and understanding (n=151)	136	90.1
		My peer seemed like she would be able to talk to anyone (n=150)	127	84.7
		My peer talked too much (n=152)	15	9.9
Sentiment	Conflict	My peer minimised my problems (n=151)	43	28.5
		My peer would get over-involved in my problems (n=150)	19	12.7
		My peer made me feel guilty (n=152)	8	5.3
		My peer was critical of me (n=147)	6	4.1
		My peer pressured me to change (n=152)	6	3.9
		My peer made me feel angry (n=152)	5	3.3

### Mothers' perceptions of supportive interactions

Responses to statements regarding the mother's perceptions of the support from their peer are grouped as either *emotional*, *informational* or *appraisal* supportive interactions, according to three peer support domains<sup>21</sup>. Supportive interactions categorised as 'emotional' support received the most positive responses, with 93% (range 88 to 96%) agreeing to these statements, compared to 'informational' support with an overall mean of 87% (range 76 to 93%) and 'appraisal support' interactions with an overall mean of 86% (range 74 to 95%).

### Mother's satisfaction with support received

Responses to 'satisfaction with support' statements are categorised into four domains. Under the *general* domain the vast majority of participants perceived their peer support experience as satisfactory overall (93%) and that they would recommend the type of support to a friend (89%).

Participants also responded positively to the domains of *perceived quality*, overall mean 83% (range

67 to 96%) in particular 'My peer was respectful to me' (96%). Statements under the *convenience* domain received positive responses (overall mean 80%, range 75 to 84%) and the overall mean for the domain of *access* was 84% (range 83 to 85%).

#### Mother's perceptions of relationship qualities

Perceptions of their peer relationship were also explored (Table 4) with statements under the theoretical perspectives of 'Perceived peer responsiveness' (domains of *intimacy*, *trust*, *perceived acceptance*, *empathy*) receiving positive responses. Participants responded most positively to statements in the domains of *trust* e.g. 'I knew my peer would respond to me in a supportive way, and *perceived acceptance* e.g. 'I felt accepted by my peer' (90.7%)

Less frequently endorsed were the domains of *attachment* (range 26-67%) and *close* (range 55-61%). The domain of *commitment* received more positive responses e.g. 'My peer invested time to help me' (85%) and 'My peer worked at maintaining a relationship with me' (80%).

The six statements within the *conflict* domain were infrequently endorsed (range 3-29%) with four of the statements [my peer]....'pressured me to change', 'made me feel guilty', 'made me feel angry' and 'was critical of me' being endorsed by less than 6% of respondents.

#### Would mothers recommend this support to others?

Women were asked if they would recommend this type of support to other new mothers, with 97%, (n=320/331) responding 'Yes'. They were given an opportunity to describe their response further, and 221 commented. Two global themes emerged from these responses. The first 'Yes, *absolutely*' contained organisational themes of 'Empathetic, reassuring, non-judgemental support', "More than just breastfeeding support" and 'An easy way to be supported'. The second global theme of 'Yes, *but....*' contained organisational themes of 'Recommend for those early days' and 'particularly for those who are isolated'. These themes are discussed further below.

**‘Yes, absolutely’**

The overwhelming response to this question was that women said ‘Yes, absolutely’ they would recommend this support.

*Empathetic, reassuring, non-judgemental support*

Women valued that their peer was an experienced mother who understood what they ‘were going through’ and was able to use this experience to support them. They appreciated that the peer provided a safe place to talk, someone outside their family and circle of friends who was unbiased and non-judgemental and was ‘just for them’. Peers were sensitive, caring, empathetic, and were someone who would listen, they could talk to, and ask questions.

*Everyone throws their opinions and advice at you as a first-time mother so it's really refreshing to have someone impartial to your family and friends circle to ask all the questions under the sun that you may (and do!!) have! ( #1444, 38 yrs. bf-6mths, ps-5.5mths, England)*

*As a new mum in that first few weeks, it can be a particularly overwhelming experience. I found it comforting to know that there was an unbiased support just a phone call away, and when it got too difficult it was nice to have someone call in to check on you. (#1523, 36 yrs. bf-6mths, ps-4.5mths, Malaysia)*

*It's good to speak to someone that has been through it before and understands the obstacles you are going through. (#3139, 25 yrs. bf-6mths, ps-6mths, Australia)*

*More than just breastfeeding support*

Peers provided advice and guidance, not only on breastfeeding matters, but on many other issues faced in the new mother’s transition to parenthood and referred mothers to professional help as needed. As well as providing practical support the peers offered emotional support, reassurance, encouragement, affirmation and helped to normalise the new mother’s experiences. The peer

1 'checking in', as well as being available for them to call, made the mothers feel secure and as though  
2 they were 'not alone'.  
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7 *I think this type of support is fantastic. As a new mother having someone to ask questions*  
8 *and receive advice from is crucial. Those first few weeks can be very hard finding positions to*  
9 *feed, helping soreness, wondering if what's happening to you is normal and to have that*  
10 *support was great. (#1204 27 yrs. bf-6mths, ps-3mths, Australia)*  
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18 *...it is useful to have someone in your corner without an agenda who can listen to your own*  
19 *experience. (#1754 31 yrs. bf-6mths, ps-4mths, Australia)*  
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#### 25 *An easy way to be supported*

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27 The telephone was a quick and easy way for women to receive support, and the proactive nature of  
28 the calls made women feel like they didn't need to 'make an effort'. Women appreciated when the  
29 peer was flexible with the call schedule (frequency and time of day), with contact being made  
30 according to the individual needs of the mother. Women also liked the continuity of the support, as  
31 they enjoyed getting to know their peer, and didn't need to explain their story each time.  
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40 *It was easier over the phone as we connect [sic] rather quickly and start to know each other*  
41 *personally and her kind words of encouragement helped me through..." (#3079 28 yrs. bf-*  
42 *6mths, ps-6mths, Australia)*  
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#### 49 **'Yes, but....'**

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51 A number of respondents said they would recommend the support but qualified the response by  
52 suggesting that the support would be best for certain groups of women.  
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#### 55 *Recommend for those early days particularly for isolated mothers*

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57 Many women felt the support was particularly vital in the early days of motherhood, for first time  
58 mothers, and that women who were isolated and had little family support would benefit the most.  
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*...those first few weeks, seems like a lifetime, it helps with the overwhelm [sic] and isolation I felt, and gave me a sense of certainty amidst the chaos. I really looked forward to our chats. I often contacted her. (#1249 31 yrs. bf-6mths, ps-3mths, Australia)*

*... especially helpful to new mothers who are new immigrants, it can make people feel like [they are] connected to the society and other people care about you. (#2038 29 yrs. bf-6mths, ps-6mths, China)*

*...when you're really isolated... it was really nice feeling that someone cared how I was getting on, as all my family live interstate. (#1145 33 yrs. bf-6mths, ps-6mths, Australia)*

A very small number of women weren't sure if they would recommend the support, explaining that they experienced difficulties in finding time for the phone calls in this busy time with a new baby, whilst others felt information from a non-professional was lacking.

**Further comments**

Participants were invited to make any further comments about the support, or the RUBY trial itself, with 96%, (n=326/341) commenting. Many women expressed their overwhelming gratitude for being a part of RUBY and for the help and support provided by their peer. Analysis of these responses revealed the same themes of 'empathetic, reassuring non-judgemental support', 'more than just breastfeeding support' and 'an easy way to be supported' as previously described.

In addition, a new theme that emerged was 'she helped and inspired me to become a proud, confident mother'. Mothers talked about the peer investing their time, and through sharing their experiences, the peer helped the mother to cope, 'keep going', trust her instincts and be proud of herself as a new mother. Many women talked about how they felt empowered, their confidence bolstered by the peer and how they were inspired to create a new breastfeeding goal.

1 *It's been wonderful to share this unique journey with her over the 6 months. Breastfeeding is*  
2 *a passion and commitment that we both feel strongly about and have enjoyed. She helped*  
3 *me to feel proud and confident about breastfeeding my baby and achieving my goal of*  
4 *breastfeeding for 6-12 months. (#1395 36 yrs. bf-6mths, ps-5.5mths, Japan)*

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10 *I would like to thank the volunteer mother for taking the time to help a new mum. This is*  
11 *time taken away from their own families to give support and encouragement to a total*  
12 *stranger.... without the support from a volunteer mum I may have stopped breastfeeding in*  
13 *the initial phases when everything felt too hard and overwhelming. (#1032 40 yrs. bf-6mths,*  
14 *ps-6mths, Zambia)*

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21 *It was also due to the advice and support from my volunteer mum that I was able to*  
22 *articulate and defend my reasons for exclusively breastfeeding until 6 months, my hope to*  
23 *breastfeed my daughter until at least 24 months, to be able to breastfeed in public. (#1070*  
24 *33 yrs. bf-6mths, ps-6mths, New Zealand)*

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31 A very small number of women stated that this type of support was not suited to them, mainly due  
32 to difficulties establishing contact and coordinating calls during the busy early days, or some feeling  
33 that the calls added to their stress as a new mother.

## 34 35 36 37 38 39 DISCUSSION

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43 This paper provides insight into the views and experiences of first-time mothers' receiving proactive  
44 telephone peer support for breastfeeding, in the context of an RCT in which the intervention tested  
45 increased breastfeeding. Whilst perceiving high levels of breastfeeding support from family and  
46 friends, women still valued the support from the peers, reporting high levels of helpfulness and  
47 overall satisfaction with the support. Women viewed their experiences as positive and felt the  
48 responsive support helped them to manage the many challenges faced in their transition to  
49 motherhood. Peers shared their experiential knowledge and provided realistic, practical advice,  
50 information, and guidance on issues such as breast milk supply, attachment and nipple pain, but also  
51 assured the mothers that much of their experience was 'normal', and similar to what others had

1 'gone through', which women found affirming and helped them to 'cope'. Findings reinforce  
2 evidence that women view the support as beyond simply breastfeeding support, providing  
3 reassurance and empowerment<sup>12 22</sup> increasing their confidence<sup>23</sup> and reducing their feelings of  
4 isolation.<sup>21</sup>  
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10 Similar to the findings reported by McInnes<sup>24</sup> mothers valued an avenue to ask questions and  
11 someone to listen to them without judgement, someone accepting of them and someone with  
12 personal experience who understood what they were going through. In this study women described  
13 the peers as friendly, caring, understanding and accepting. Having a single peer providing support  
14 was important to the mothers, as they built a trusting relationship over the period of contact, with  
15 many women feeling comfortable enough to contact the peer if needed, yet few reported feeling  
16 dependent upon their peer. In the 2010 study of peer support for postpartum depression, Dennis<sup>21</sup>  
17 suggested a lack of dependence was associated with women who did not need extra support, or  
18 who only needed it for a short period of time, however in this study many women expressed that  
19 they felt inspired, gained confidence and were proud of themselves as a mother, and thus a lack of  
20 dependence on the peer, might be seen as an expression of empowerment.  
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35 Triggers for breastfeeding cessation do not always stem from issues with feeding techniques or  
36 problems with breastfeeding itself, but instead can evolve from emotional or social triggers<sup>25</sup>. When  
37 challenges arise, many women feel that making changes to breastfeeding is one of the few resources  
38 within their control that can bring about family well-being<sup>26</sup>. The high levels of emotional, as well as  
39 appraisal support reported by the mothers in this study may have acted as a buffer to their stressors  
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Women found the support convenient and accessible, with the schedule of calls, most frequent in  
the early weeks and months, and less so from three to six months, considered 'about right', whilst  
allowing for schedule flexibility. They appreciated the proactive nature of the support and the  
additional ability to access their peer when they wanted. Less than half of the participants made  
reactive contacts, and most only once or twice, with this contact mostly through text message. Less  
than a third of respondents were supported for the full six months, with the decision to cease the

support most frequently made together with the peer, or many mothers deciding themselves. Dennis<sup>17</sup> reported a third of women did not maintain contact beyond two months with their peer, and only 30% having some contact in the third and final month of support, and as such a standardised peer support intervention was unnecessary. Similarly, women in this study did not necessarily need the full six months of support to gain the benefits, suggesting the length of support should be flexible and tailored to the individual needs of each mother. On the other hand, what was tested in the study was support following a suggested call schedule and implementing this intervention did result in increased breast milk feeding at six months compared with standard care.

## LIMITATIONS OF THIS STUDY

This study is limited by non-responders being less likely to have been breastfeeding at six months, compared to responders, and therefore these women may have been more dissatisfied with their experience.

## STRENGTH OF THE STUDY AND FURTHER RECOMMENDATIONS

This study is strengthened by the large number of participants, the description of the intensity of the support and the use of qualitative data to assess the validity of the quantitative findings in the context of an RCT where the intervention improved breastfeeding rates at six months. If implementing a program of telephone-based peer support, recommendations should include a regular yet flexible support schedule that can be tailored to suit the individual mother. The use of text messages by peers could be used as complementary, or occasionally supplementary, to calls in an effort to establish or maintain contact with mothers who may be finding difficulty making time.

## CONCLUSION

In view of the improved breastfeeding outcomes of women who received the proactive telephone-based peer support in the RUBY RCT, and their positive experiences of receiving the proactive telephone-based peer support, there is evidence to support the roll-out of this model. Providing

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accessible, proactive support for breastfeeding via telephone is an important resource for women. While women valued the information their peer provided, so too they benefited from the empathy, reassurance and encouragement. Recommendations to enhance and facilitate communication between the peer and the mother, include ensuring flexibility in the scheduling of calls and the use of text messages in conjunction with proactive calls, tailored to meet the individual needs of the mother.

**Acknowledgments:** The authors thank the women who participated in the study, the peer supporters and the research staff.

**Study Protocol:** BMC Pregnancy Childbirth. 2014 May 28;14:177. doi: 10.1186/1471-2393-14-177. as a supplementary file.

**Authors contribution:** All authors were involved with the design of the study and the data collection tool. FMcL was responsible for the collection of the data. All authors had full access to all the data, were responsible for the integrity of the data and were involved in the analysis and interpretation of the data. FMcL took the lead in writing the manuscript with DF, HMcL and TS providing critical feedback and editing to the final version of the manuscript.

**Funding Statement:** This work was supported by philanthropic funding from the Felton Bequest, grant number CT 13442, and La Trobe University.

**Competing interests statement:** The authors have no competing interests to declare.

**Disclaimer:** The views expressed are those of the authors and independent of the funding body.

**Ethics Approval:** This study obtained ethics approval from La Trobe University (HEC 12-082), Royal Women’s Hospital (HREC 12/25), Monash Medical Centre (HREC 12251B) and Western Health

(HREC/12/WH/107). Women who chose to participate provided written consent as part of the RUBY RCT.

Provenance and peer review: Not commissioned; externally peer reviewed.

Data sharing statement: No additional data are available.

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For peer review only

# BMJ Open

## Proactive telephone-based peer support for breastfeeding: a cross-sectional survey of women's experiences of receiving support in the RUBY randomised controlled trial

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2020-040412.R1
Article Type:	Original research
Date Submitted by the Author:	22-Aug-2020
Complete List of Authors:	McLardie-Hore, Fiona; Royal Women's Hospital, Midwifery and Maternity Services Research; La Trobe University, Judith Lumley Centre McLachlan, HL; La Trobe University, Judith Lumley Centre; La Trobe University, School of Nursing and Midwifery Shafiei, Touran; La Trobe University, Judith Lumley Centre Forster, Della; La Trobe University, Judith Lumley Centre; Royal Women's Hospital, Maternity Services
<b>Primary Subject Heading</b>:	Public health
Secondary Subject Heading:	Nutrition and metabolism
Keywords:	PUBLIC HEALTH, Maternal medicine < OBSTETRICS, EPIDEMIOLOGY

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# Proactive telephone-based peer support for breastfeeding: a cross-sectional survey of women's experiences of receiving support in the RUBY randomised controlled trial

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**Word count:** 4713

**Abstract:** 296

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**ABSTRACT**

**Objective** The RUBY randomised controlled trial (RCT) of proactive telephone-based peer support for breastfeeding found that infants of women allocated to the intervention were more likely to be receiving breast milk at six months of age than those receiving usual care. This study explores women’s experiences of receiving the RUBY peer support intervention.

**Design** Cross-sectional survey

**Setting** Women were recruited from the postnatal units of three tertiary hospitals in Melbourne, Australia.

**Participants** Women allocated to receive telephone peer support in the RUBY RCT who completed a telephone interview at six months postpartum (501/574 [87%] in trial intervention arm) were invited to complete a postal survey on their experience of receiving support.

**Outcomes** Experiences of support from the allocated peer, perceived helpfulness, topics discussed, overall satisfaction with the support, and frequency and duration of contact were explored.

**Results** Surveys were sent between August 2013 and March 2016, and 72% (360/501) responded of whom 341 recalled receiving peer support. Women reported high levels of perceived helpfulness (79%) and overall satisfaction with the peer support (93%). Discussions included breastfeeding topics (milk supply, attachment), baby care, baby behaviour, and reassurance and emotional support. Women valued the practical and realistic support from another mother, as well as the proactive nature, continuity and accessibility of the support. The empathy, reassurance and encouragement provided helped the mothers to ‘cope’, to continue breastfeeding, and to feel empowered.

**Conclusion** Most respondents were positive about their experience of receiving proactive telephone peer support for breastfeeding, further supporting the roll-out of this model as a strategy for increasing breastfeeding maintenance to six months. Recommendations include flexibility in the scheduling of calls according to individual need, and the use of text messages in conjunction with proactive calls, to enhance and facilitate communication between the peer and the mother.

**Keywords** breastfeeding, telephone, peer support

**Trial registration:** ACTRN12612001024831

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- The study was conducted as part of a large systematically conducted randomised controlled trial, increasing the study rigour
- Qualitative data have been used to support and enhance understanding of quantitative data
- The use of a validated tool, Peer Support Evaluation Inventory (PSEI) to explore mother's experiences strengthens this study
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- The study was restricted to primiparous women, from metropolitan Melbourne, Australia
- The PSEI tool was added to the survey after the first 207 surveys had been distributed, resulting in fewer responses to this section

## INTRODUCTION

### Background

Despite the significant health and economic benefits of breastfeeding<sup>1 2</sup> effective strategies to increase breastfeeding maintenance in high-income countries have proven complex. Breastfeeding duration in most high-income countries remains shorter compared to low-income countries<sup>2</sup> and shorter than the World Health Organization recommendations.<sup>3</sup> Increasing the rates of breastfeeding worldwide is fundamental to achieving the United Nations Sustainable Development Goals by 2030.<sup>4</sup> The most recent Cochrane review on support for healthy breastfeeding mothers and healthy term babies found evidence of the value of face-to-face support from health professionals to

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increase breastfeeding <sup>5</sup>, however this is an expensive option at a population level, particularly if the intervention needs to be maintained for up to six months postpartum. Programs of peer support for breastfeeding, whilst less costly than professional support, have varied greatly in their timing, mode of delivery, and length of support, producing mixed results, with the more effective programs being in low-income settings.<sup>5</sup>

Telephone peer support is another potentially effective, sustainable and cost-effective intervention, however the Cochrane review found no association between (predominantly) telephone peer support and increased breastfeeding maintenance.<sup>5</sup> Since that review, a large Australian RCT of 1152 women ‘Ringing up about breastfeeding early’ (RUBY) found a positive association between receiving proactive (volunteer) peer support by telephone, and an increase in any breastfeeding at six-months postpartum (intervention 75%, usual care 69%).<sup>6</sup> Conducted between 2013 and 2016, participants in the RUBY trial were first time mothers, recruited after birth, prior to discharge from hospital. Women allocated to the intervention arm of the trial received standard postnatal care and breastfeeding support in hospital and in the community, along with proactive telephone-based support from an allocated peer volunteer, who had themselves breastfed for at least six-months, and who received four hours of training.<sup>7</sup> A total of 230 peer volunteers provided the intervention in the RUBY RCT, supporting on average two mothers each. Volunteer training and experiences have been reported elsewhere and will not be discussed in this paper<sup>8</sup> For those allocated to the intervention, the peer calls were scheduled twice in the first week after birth, weekly until 12 weeks postpartum and then three to four weekly until six-months postpartum, with the participant able to contact the peer between scheduled calls. The calls focused on the mother’s breastfeeding experience as well as mother and infant wellbeing, with peers referring mothers to additional services as needed. More detail is available in the study protocol.<sup>7</sup>

Proactive telephone support, provided by women who have themselves breastfed for at least six months, is an intervention that is potentially well suited for scale-up in many countries, with pre-existing consumer-led breastfeeding associations a possible base for such an intervention. Most of these organisations currently require women to actively seek the support themselves. Whilst this

1 may be of great benefit to the many women who actively engage with these organisations, it is not  
2 necessarily the best option for women who wish to breastfeed but are less motivated or have lower  
3 self-efficacy. Women whose infants are likely to benefit most from breastfeeding support are the  
4 least likely to access it.<sup>5 9</sup> It is for these reasons the proactive telephone support model is potentially  
5 a powerful and scalable intervention at a population level.  
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11 It is imperative for organisations implementing a proactive peer support intervention for  
12 breastfeeding to understand the consumer experience to ensure programs are acceptable,  
13 accessible, responsive and provide improved outcomes.<sup>10</sup> Current literature describing mothers'  
14 experiences of proactive breastfeeding support programs is mainly limited to a few relatively small  
15 studies in Sweden <sup>11</sup> (proactive, telephone-based professional support), the United Kingdom<sup>12-15</sup>  
16 (predominantly face to face peer support models) and Australia <sup>16 17</sup> (mixture of peer/professional  
17 support face to face). Dennis' <sup>18 19</sup> Canadian study of the effect of proactive telephone-based peer  
18 support on breastfeeding, on which the RUBY study was based, reports maternal experiences  
19 including high rates of overall satisfaction and satisfaction with 'enough peer contact to help them  
20 with breastfeeding'. Given the paucity of literature reporting how, and what women experience in a  
21 proactive telephone-based peer support model, this paper presents the findings of a cross-sectional  
22 study of mothers receiving the intervention in the RUBY RCT.  
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## 40 Rationale

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43 This nested sub-study of the larger RUBY RCT will evaluate the interventions from the participant  
44 perspective, a secondary aim of the RUBY trial.<sup>7</sup> In a model of proactive telephone-based peer  
45 support, which produced positive breastfeeding outcomes, it is important to understand how, and  
46 what, supportive interactions the participants experienced and their views of this support. These  
47 perspectives can inform the frameworks and development, of future peer support programs.  
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## 56 METHODS

### 57 Study design

All women in the intervention arm of the RUBY RCT who completed the six-month telephone interview were invited to complete a postal survey (Appendix), which was specifically designed to explore their experiences of receiving peer support.

**Patient public involvement**

Representatives of the Australian Breastfeeding Association (<https://www.breastfeeding.asn.au/>), the largest breastfeeding advocacy group in Australia, were members of the RUBY research team and were involved in the design of the survey and training of the peer volunteers.

**Data collection**

Data collection for the RUBY study occurred at three time points; face to face at recruitment, by telephone at six months post birth, and by postal survey (intervention group only) following the six-month interview. <sup>7</sup> Participant characteristics, breastfeeding intention, mothers’ perceptions of family views of her breastfeeding plans, and perceived level of family and friends support for breastfeeding were collected at recruitment. Infant feeding outcomes were collected at the six-month interview. Women allocated to the intervention (n=574), and who completed the six-month interview (n=501), were sent a postal survey between August 2013 and March 2016 which explored their views and experiences of telephone support. Following the initial postal survey invitation, a reminder letter and a second invitation to complete the postal survey were sent to non-responders at three and six weeks respectively.

Women were asked to respond to a series of questions regarding the frequency and average length of the calls from their peer, the period over which the support was received, other type of contact with their peer, and topics discussed during the calls. Participants were also asked to describe how helpful they found the calls on a five-point Likert-type scale where 1 = ‘Not at all helpful’ and 5 ‘Very helpful’. After the first 207 surveys had been sent, it was decided to add a validated tool to the subsequent surveys, to gain a broader understanding of why the peer support may have been helpful (if it was). The ‘Peer Support Evaluation Inventory’ (PSEI) <sup>20</sup> was chosen as being a good fit,

however following ethics review and advice, in order to minimise respondent burden, it was decided that only three of the original four most relevant subscales of the PSEI would be used. The instructions for the PSEI specifically state that each subscale of the PSEI can be used independently. We therefore chose to use: Mother's perceptions of supportive interactions, Maternal satisfaction with support received, and Maternal perceptions of relationship qualities. We did not include Maternal perceptions of perceived benefits. The self-report tool invites participants to respond to a series of statements to evaluate the mother's perceptions of supportive interactions, relationship qualities, and satisfaction with the support experience using a five-point Likert-type scale from 1= 'Strongly disagree' to 5= 'Strongly agree'.

## Data analysis

Survey responses were entered onto Redcap and downloaded to Stata Statistical Software 14 (Statacorp.,2015) for data cleaning and analysis. Participant characteristics, breastfeeding plans and perception of support for breastfeeding were analysed using descriptive statistics, frequencies and percentages. The responses to the PSEI were dichotomised into 'Agree' (score 4= 'Agree' or 5= 'Strongly agree') or 'Disagree' (score 1='Strongly disagree' to 3= 'Unsure') and subsequently analysed using frequencies and percentages. Overall mean was calculated for the positive scales of 'perceptions of supportive interactions' and 'satisfaction with support received'. Means were not calculated for the scale 'perceptions of relationship qualities' as this domain contained some items which could be interpreted differently (positively or negatively) e.g. 'I depended on my peer' maybe be viewed as positive by some, but not others, thus an overall mean may not clearly indicate participant perceptions, thus we considered it inappropriate to reverse score these items.

Content analysis was used for open-ended, short answer responses to questions about positive and negative aspects of calls, with codes derived from the text and organised into categories and then themes.<sup>21</sup> Codes were read and discussed between research team members FMcL and DF, with categories and themes developed and agreed upon."

Longer open-ended responses were thematically coded using the Attride-Stirling analytic tool <sup>22</sup> with basic themes systematically abstracted from the data and grouped into similar categories (organising themes). Inductive analysis of these organising themes provides greater understanding of the overall meaning of the data through the development of global themes. The basic, organising and global themes were discussed between research team members FMcL, HMcL at each stage and consensus reached. Direct quotes from participants were used to illustrate the themes, with quotes contextualised by participant identification number, age, length of breastfeeding (bf) in months, length of peer support (ps) in months, and country of birth.

## RESULTS

### Participants

In total 360 of the 501 (72%) women sent a postal survey responded. Of these, 341 stated that they had received calls from a peer, whilst 19 women stated they did not receive the calls and subsequently did not complete any further responses. These 19 women are therefore included in Table 1 only. Table 1 describes the characteristics of both respondents and non-respondents to the postal survey, including women’s perceptions of breastfeeding support from family and friends. Over half the participants were born in Australia, with most speaking English as a first language. Of those born overseas, China, India, and the United Kingdom were the most frequently reported country of origin, with 48 other countries of birth reported. At recruitment, women were asked to rate the level of breastfeeding support they perceived they had from family and friends, with the majority of participants responding, ‘A lot of support’ (73%).

Women who did not respond to the survey were younger ( $p < 0.001$ ), less likely than respondents to be married or live with a partner ( $p 0.02$ ), have completed a degree or higher ( $p < 0.001$ ), have English as their first language ( $p < 0.001$ ), and more likely to have a pension or benefit as their main income ( $p < 0.001$ ), be born overseas ( $p = 0.006$ ), have smoked pre-pregnancy ( $p = 0.01$ ). Their infants were more likely to have received infant formula prior to recruitment ( $p = 0.005$ ) and less

likely to be receiving any breast milk ( $p < 0.001$ ) or only breast milk ( $p < 0.001$ ) at six months . (Table

1).

**Table 1: Participant characteristics**

At recruitment to RUBY RCT	Respondents (n=360)		Non-respondents (n=141)	
Maternal age at recruitment to RCT (years) mean (SD)	31.9	4.6 (sd)	29.2	5.4 (sd)
	n	%	n	%
Married or living with partner	349	96.9	130	92.2
Education level graduate degree or higher	256	71.3	71	50.4
Household weekly income pre-tax (\$AUD)				
Less than \$1400	83	23.0	65	46.1
\$1400 or more	243	67.5	52	36.1
Declined to answer	34	9.4	24	17.0
Pension or benefit n=359	10	2.8	20	14.2
Born in Australia	192	53.3	56	39.7
English as first language	245	68.1	70	49.7
Smoked pre-pregnancy	37	10.2	28	19.9
Caesarean birth	95	26.4	47	33.3
Baby gestation at birth (weeks) mean (SD)	39.6	1.2(sd)	39.3	1.1 (sd)
Birthweight (grams) mean (SD)	3401.7	445.7(sd)	3367.4	459.9 (sd)
Baby admitted to neonatal/special care nursery	24	6.7	6	4.3
Baby had formula since birth, prior to recruitment to RUBY RCT	62	17.2	40	28.4
Plans to breastfeed 6 months or more	281	78.1	113	80.1
Level of breastfeeding support from family and friends				
No support	4	1.1	3	2.1
A little support	33	9.2	14	9.9
Moderate support	62	17.2	22	15.6
A lot of support	261	72.5	105	74.5
<b>Breastfeeding outcomes at 6-month interview</b>				
Any breast milk	293	81.4	83	58.7
Only breast milk (may include solids)	216	60.0	52	36.9

### Peer support contacts

Of the 360 returned surveys, 341 (95%) participants reported receiving one or more contact/s from their peer. Table 2 shows the peer support contact frequency and duration reported by participants.

Over half the women (56%) received weekly calls from their peer in the first three months after birth, as per the planned schedule of calls, with 17% receiving less frequent calls and 20% reporting the call frequency varied. Between three and six months, 42% of women received calls second weekly or more often, 27 % received monthly calls and 33% reported calls varied. Most (85%) reported the frequency of calls was 'About right', with only 5% reporting they were 'Not often

enough’. Approximately one third of women reported that the length of calls was 6-10 minutes on average, and another third reported they were 11-20 minutes. Asked ‘When did the calls from the volunteers stop?’ over half the women reported ceasing prior to 26 weeks, 32% stated *at* 26 weeks (as per the intervention schedule), and 14% reported after 26 weeks. In terms of who decided to stop the calls, 38% of women ‘Agreed together’ with the peer, 22% stated the ‘Peer decided’, and 19% said ‘I decided’.

Other contact with their peer

Approximately 40% of respondents had called their peer (reactive contact) between the scheduled calls, and 63% made contact in other ways, mostly by text message. When asked the reasons for initiating contact, participant’s responses included ‘returning or rescheduling a call’ (n=113/213, 53%), for ‘breastfeeding advice’ (n=58/213, 27%) or to ‘touch base and update progress’ (n=35/213, 16%). Responding to how many contacts they initiated, most commonly women initiated only one or two contacts themselves.

**Table 2: Frequency and duration of contact with peer volunteer**

<b>On average how often did you receive calls from your volunteer in the first 3 months? n=341</b>	<b>n</b>	<b>%</b>
Twice weekly	22	6.5
Weekly	192	56.3
2nd weekly	53	15.5
Monthly	5	1.5
It varied	69	20.3
<b>On average how often did you receive calls from your volunteer after the first 3 months? n=331</b>	<b>n</b>	<b>%</b>
Twice weekly	8	2.5
Weekly	38	11.6
2nd weekly	90	27.5
Monthly	87	26.6
It varied	108	32.5
<b>How did you feel about the frequency of calls you received? n=332</b>	<b>n</b>	<b>%</b>
About right	283	85.3
Too often	33	9.9
Not often enough (I would have liked more calls)	16	4.8
<b>On average how long did these calls last? n=332</b>	<b>n</b>	<b>%</b>
0-5 minutes	43	13.0
6-10 minutes	105	31.6
11-20 minutes	108	32.5
Longer than 20 minutes	44	13.3
It varied	32	9.6
<b>When did the calls from your volunteer stop (in weeks)? n=317</b>	<b>n</b>	<b>%</b>
1	2	0.6
2- 4	27	8.5

5 - 8	28	8.8
9-12 weeks	15	4.7
13-16 weeks	35	11.0
17 – 20 weeks	30	9.5
21 – 25 weeks	35	11.0
26	100	31.5
Greater than 26 weeks	45	14.2
<b>If the calls stopped who decided to stop the calls? n=295</b>		
We agreed together	111	37.6
Volunteer decided	64	21.7
I decided	57	19.3
Don't remember	48	16.3
Other	15	5.1
<b>Did you ever call the volunteer yourself? n=335</b>		
Yes	137	40.9
<b>Did you ever contact the volunteer yourself in another way? n=341</b>		
Yes	215	63.0
<b>Other type of contact n=215</b>		
Text message (Short Message Service)	201	93.4
Email	12	5.6
Other (e.g. Facebook, WhatsApp, WeChat, Post)	12	5.6
<b>If you contacted your volunteer, can you recall the number of times? n=188</b>		
1	38	20.4
2	54	29.0
3	30	16.1
4	8	4.3
5	30	16.1
6 - 20	26	14.1

### Topics discussed with peer volunteer

Participants were asked 'What things did you talk about with the volunteer mother?', selecting from a number of pre-specified topics. 'Milk supply' (76%) was the most frequent response, with 'Baby behaviour' (74%) and 'Baby attaching to the breast' (72%) the next most frequent (Table 3).

**Table 3: Topics discussed with peer volunteer**

<b>What things did you talk about with your peer volunteer? n=341</b>	<b>n</b>	<b>%*</b>
Milk supply	259	76.0
Baby behaviour	251	73.6
Baby attaching to the breast	246	72.1
Reassured me	245	71.9
Nipple or breast pain	211	61.9
Advised me where to get help	207	60.7
Lack of sleep	195	57.2
How often to feed my baby	190	55.7
Baby sleep/wake patterns	187	54.8
Gave me emotional support	185	54.3
Settling my baby	161	47.2
Baby care	161	47.2
My emotional wellbeing	145	42.5

Support from my family	124	36.4
Other	47	13.8

Positive and negative aspects of calls

Women were asked how helpful they would describe the telephone support they received overall, on a scale of ‘1’ (Not at all helpful) to ‘5’ (Very helpful), and 79% (n=261/330) of participants responded ‘Helpful’ to ‘Very helpful’, 12% responded ‘3’ and 9% ‘1’ to ‘2’ (Not helpful). Asked to respond to the question “Did you find anything particularly positive (Helpful) about these calls?” 87% (n=286/328) of participants responded ‘Yes’. Further to this, 279 completed an open-ended response to describe what was positive. Content analysis was undertaken. Themes included having another mother knowing what she was going through (23%), receiving advice and guidance (15%), reassurance (13%) and that the peers were friendly and easy to talk to (13%).

Women were also asked to respond to “Did you find anything negative (not helpful) about these calls?” and 15% (n=48/331) responded ‘Yes’. Content analysis of these responses included there was limited advice (17%), difficulty finding time for the call (15%) and nothing to talk about (15%).

Peer Support Evaluation Inventory

The three subscales of the Peer Support Evaluation Inventory<sup>20</sup> used to further understand the mothers’ experience of support included ‘Mother’s perceptions of supportive interactions’, ‘Maternal satisfaction with support received’ and ‘Maternal perceptions of relationship qualities’, with statements grouped under common domains. (Table 4)

Table 4: Peer support evaluation inventory

Maternal perceptions of supportive interactions				
Domain	Subscale item	Agree – Strongly agree		Domain mean
		n	%	
Emotional support	Listened to me talk about my feelings or concerns (n=152)	146	96.0	92.8%
	Helped me feel that I was not alone in my situation (n=151)	143	94.7	
	Expressed interest and concern about how I was doing (n=152)	144	94.7	
	Told me that help was available when I needed it (n=152)	138	90.8	
	Accepted me for who I was (n=152)	133	87.5	
Informational support	Provided me with practical information (n=152)	142	93.4	86.5%
	Gave trustworthy advice (n=152)	139	91.4	
	Assisted me to solve my problems or concerns (n=151)	134	88.7	
	Told me what was usual for my current situation (n=151)	129	85.4	

	Suggested other ways of doing things (n=150)	126	84.0	
	Told me what to expect in a certain situation (n=152)	115	75.6	
Appraisal support	Helped me feel that what I was going through was ‘normal’ (n=151)	144	95.4	86.1%
	Told me that I did something well (n=152)	134	88.2	
	Gave me feedback on how I was doing (n=149)	130	87.2	
	Expressed admiration for a personal quality of mine (n=151)	111	73.5	
Maternal satisfaction with support received				
Domain	Subscale item	Agree-Strongly agree n          %		Domain mean
General satisfaction	Overall, I am satisfied with my peer support experience (n=151)	140	92.7	82.5%
	I would recommend this type of support to a friend (n=152)	135	88.8	
Perceived quality	My peer was respectful to me (n=151)	145	96.0	82.3%
	I liked my peer (n=152)	141	92.8	
	My peer provided the assistance I needed (n=152)	127	83.6	
	My peer met my expectations (n=152)	123	80.9	
	There is nothing I would have liked done differently (n=148)	109	73.6	
	For my situation one-to-one support was better than group support (n=149)	100	67.1	
Convenience	I liked the support over the telephone (n=152)	129	84.3	80.3%
	Receiving support from my peer was convenient for me (n=151)	122	80.8	
	I had very few problems with the support I received (n=149)	112	75.2	
Access	My peer telephoned when planned (n=149)	127	85.2	84.1%
	I was able to talk to my peer when I needed to (n=149)	126	84.6	
	I had enough contact with my peer (n=149)	123	82.6	
Maternal perceptions of relationship qualities				
Theoretical perspective	Domain	Subscale item	Agree-Strongly agree n          %	
Perceived peer responsiveness	Intimacy	If something important happened to me I could share the experience with my peer (n=152)	122	81.9
		I knew that whatever I said was just between us (n=152)	116	76.3
		My peer could tell when I was worried about something (n=152)	83	54.6
	Trust	I knew my peer would respond to me in a supportive way (n=152)	139	91.4
		My peer was trustworthy (n=149)	131	87.9
		My peer was dependable (n=151)	126	83.4
	Perceived acceptance	I felt accepted by my peer (n=151)	137	90.7
		I felt comfortable “just being myself” with my peer (n=152)	132	86.8
		With my peer I could confide my most inner feelings (n=150)	95	63.3

	Empathy	My peer understood my point of view (n=152)	132	86.8	
		My peer felt bad if things didn't go well for me (n=152)	108	71.1	
Nature and extent of interdependence	Attachment	I felt comfortable getting close to my peer (n=151)	101	66.9	
		I depended on my peer (n=150)	39	26.0	
	Close	I felt close to my peer (n=152)	90	60.5	
		My peer influenced how I felt or acted (n=150)	82	54.7	
Peer qualities	Commitment	My peer invested time to help me (n=152)	129	84.9	
		My peer worked at maintaining a relationship with me (n=151)	121	80.1	
		My peer was an important source of support for me (n=151)	108	71.5	
		I looked forward to talking with my peer (n=152)	107	70.4	
	Social competence	My peer presented a good first impression (n=151)	142	94.0	
		My peer was interesting and enjoyable to talk to (n=151)	137	90.7	
		My peer revealed personal information (n=149)	78	52.3	
	Social skills	My peer was sensitive and understanding (n=151)	136	90.1	
		My peer seemed like she would be able to talk to anyone (n=150)	127	84.7	
		My peer talked too much (n=152)	15	9.9	
Sentiment	Conflict	My peer minimised my problems (n=151)	43	28.5	
		My peer would get over-involved in my problems (n=150)	19	12.7	
		My peer made me feel guilty (n=152)	8	5.3	
		My peer was critical of me (n=147)	6	4.1	
		My peer pressured me to change (n=152)	6	3.9	
		My peer made me feel angry (n=152)	5	3.3	

Responses to statements regarding the mother's perceptions of the support from their peer are grouped as either *emotional*, *informational* or *appraisal* supportive interactions, according to three peer support domains<sup>23</sup>. Of these domains 'emotional' support received the most positive responses, with a mean of 93% agreeing with these statements. Responding to 'satisfaction with support' statements under the *general* domain, the majority of participants perceived their peer support experience as satisfactory overall (93%) and that they would recommend the type of support to a friend (89%). Participants also responded positively to the domains of *perceived quality*,

in particular the statement 'My peer was respectful to me' Perceptions of their peer relationship were also explored with statements under the theoretical perspectives of 'Perceived peer responsiveness' with participants responding most positively to statements in the domains of *trust*, and *perceived acceptance*.

Less frequently endorsed were the domains of *attachment* and *close*. and the six statements within the *conflict* domain were infrequently agreed upon, with four of the statements [my peer]....'pressured me to change', 'made me feel guilty', 'made me feel angry' and 'was critical of me' being endorsed by less than 6% of respondents.

### **Would mothers recommend this support to others?**

Women were asked if they would recommend this type of support to other new mothers, with 97%, (n=320/331) responding 'Yes'. They were given an opportunity to describe their response further, and 221 commented. Two global themes emerged from these responses. The first '*Yes, absolutely*' contained organisational themes of 'Empathetic, reassuring, non-judgemental support', "More than just breastfeeding support" and 'An easy way to be supported'. The second global theme of '*Yes, but....*' contained organisational themes of 'Recommend for those early days' and 'particularly for those who are isolated'. These themes are discussed further below.

#### **'Yes, absolutely'**

The greatest response to this question was that women said 'Yes, absolutely' they would recommend this support.

#### *Empathetic, reassuring, non-judgemental support*

Women valued that their peer was an experienced mother who understood what they 'were going through' and was able to use this experience to support them. They appreciated that the peer provided a safe place to talk, someone outside their family and circle of friends who was unbiased and non-judgemental and was 'just for them'. Peers were sensitive, caring, empathetic, and were someone who would listen, they could talk to, and ask questions.

Everyone throws their opinions and advice at you as a first-time mother so it's really refreshing to have someone impartial to your family and friends circle to ask all the questions under the sun that you may (and do!!) have! ( #1444, 38 yrs. bf-6mths, ps-5.5mths, England)

As a new mum in that first few weeks, it can be a particularly overwhelming experience. I found it comforting to know that there was an unbiased support just a phone call away, and when it got too difficult it was nice to have someone call in to check on you. (#1523, 36 yrs. bf-6mths, ps-4.5mths, Malaysia)

It's good to speak to someone that has been through it before and understands the obstacles you are going through. (#3139, 25 yrs. bf-6mths, ps-6mths, Australia)

#### *More than just breastfeeding support*

Peers provided advice and guidance, not only on breastfeeding matters, but on many other issues faced in the new mother's transition to parenthood and referred mothers to professional help as needed. As well as providing practical support the peers offered emotional support, reassurance, encouragement, affirmation and helped to normalise the new mother's experiences. The peer 'checking in', as well as being available for them to call, made the mothers feel secure and as though they were 'not alone'.

I think this type of support is fantastic. As a new mother having someone to ask questions and receive advice from is crucial. Those first few weeks can be very hard finding positions to feed, helping soreness, wondering if what's happening to you is normal and to have that support was great. (#1204 27 yrs. bf-6mths, ps-3mths, Australia)

...it is useful to have someone in your corner without an agenda who can listen to your own experience. (#1754 31 yrs. bf-6mths, ps-4mths, Australia)

### *An easy way to be supported*

The telephone was a quick and easy way for women to receive support, and the proactive nature of the calls made women feel like they didn't need to 'make an effort'. Women appreciated when the peer was flexible with the call schedule (frequency and time of day), with contact being made according to the individual needs of the mother. Women also liked the continuity of the support, as they enjoyed getting to know their peer, and didn't need to explain their story each time.

*It was easier over the phone as we connect [sic] rather quickly and start to know each other personally and her kind words of encouragement helped me through..." (#3079 28 yrs. bf-6mths, ps-6mths, Australia)*

### **'Yes, but....'**

A number of respondents said they would recommend the support but qualified the response by suggesting that the support would be best for certain groups of women.

#### *Recommend for those early days particularly for isolated mothers*

Many women felt the support was particularly vital in the early days of motherhood, for first time mothers, and that women who were isolated and had little family support would benefit the most.

*...those first few weeks, seems like a lifetime, it helps with the overwhelm [sic] and isolation I felt, and gave me a sense of certainty amidst the chaos. I really looked forward to our chats. I often contacted her. (#1249 31 yrs. bf-6mths, ps-3mths, Australia)*

*... especially helpful to new mothers who are new immigrants, it can make people feel like [they are] connected to the society and other people care about you. (#2038 29 yrs. bf-6mths, ps-6mths, China)*

*...when you're really isolated... it was really nice feeling that someone cared how I was getting on, as all my family live interstate. (#1145 33 yrs. bf-6mths, ps-6mths, Australia)*

A small number of women weren't sure if they would recommend the support, explaining that they experienced difficulties in finding time for the phone calls in this busy time with a new baby, whilst others felt information from a non-professional was lacking.

**Further comments**

Participants were invited to make any further comments about the support, or the RUBY trial itself, with 96%, (n=326/341) commenting. Many women expressed their overwhelming gratitude for being a part of RUBY and for the help and support provided by their peer. Analysis of these responses revealed the same themes of 'empathetic, reassuring non-judgemental support', 'more than just breastfeeding support' and 'an easy way to be supported' as previously described.

In addition, a new theme that emerged was 'she helped and inspired me to become a proud, confident mother'. Mothers talked about the peer investing their time, and through sharing their experiences, the peer helped the mother to cope, 'keep going', trust her instincts and be proud of herself as a new mother. Many women talked about how they felt empowered, their confidence bolstered by the peer and how they were inspired to create a new breastfeeding goal.

*It's been wonderful to share this unique journey with her over the 6 months. Breastfeeding is a passion and commitment that we both feel strongly about and have enjoyed. She helped me to feel proud and confident about breastfeeding my baby and achieving my goal of breastfeeding for 6-12 months. (#1395 36 yrs. bf-6mths, ps-5.5mths, Japan)*

*I would like to thank the volunteer mother for taking the time to help a new mum. This is time taken away from their own families to give support and encouragement to a total stranger.... without the support from a volunteer mum I may have stopped breastfeeding in the initial phases when everything felt too hard and overwhelming. (#1032 40 yrs. bf-6mths, ps-6mths, Zambia)*

1 *It was also due to the advice and support from my volunteer mum that I was able to*  
2 *articulate and defend my reasons for exclusively breastfeeding until 6 months, my hope to*  
3 *breastfeed my daughter until at least 24 months, to be able to breastfeed in public. (#1070*  
4 *33 yrs. bf-6mths, ps-6mths, New Zealand)*

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10 A small number of women stated that this type of support was not suited to them, mainly due to  
11 difficulties establishing contact and coordinating calls during the busy early days, or some feeling  
12 that the calls added to their stress as a new mother.  
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## 16 17 18 DISCUSSION

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21 This paper provides insight into the views and experiences of first-time mothers' receiving proactive  
22 telephone peer support for breastfeeding, in the context of an RCT in which the intervention tested  
23 increased breastfeeding. Whilst perceiving high levels of breastfeeding support from family and  
24 friends, women still valued the support from the peers, reporting high levels of helpfulness and  
25 overall satisfaction with the support. Women viewed their experiences as positive and felt the  
26 responsive support helped them to manage the many challenges faced in their transition to  
27 motherhood. Peers shared their experiential knowledge and provided realistic, practical advice,  
28 information, and guidance on issues such as breast milk supply, attachment and nipple pain, but also  
29 assured the mothers that much of their experience was 'normal', and similar to what others had  
30 'gone through', which women found affirming and helped them to 'cope'. Findings reinforce  
31 evidence that women view the support as beyond simply breastfeeding support, providing  
32 reassurance and empowerment<sup>13 24</sup> increasing their confidence<sup>25</sup> and reducing their feelings of  
33 isolation.<sup>23</sup>  
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51 Similar to the findings reported by McInnes<sup>26</sup> mothers valued an avenue to ask questions and  
52 someone to listen to them without judgement, someone accepting of them and someone with  
53 personal experience who understood what they were going through. In this study women described  
54 the peers as friendly, caring, understanding and accepting. Having a single peer providing support  
55 was important to the mothers, as they built a trusting relationship over the period of contact, with  
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1 many women feeling comfortable enough to contact the peer if needed, yet most did not report  
2 feeling dependent upon their peer. In the 2010 study of peer support for postpartum depression,  
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4 Dennis <sup>23</sup> suggested a lack of dependence was associated with women who did not need extra  
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6 support, or who only needed it for a short period of time, however in this study many women  
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8 expressed that they felt inspired, gained confidence and were proud of themselves as a mother, and  
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10 thus a lack of dependence on the peer, might be seen as an expression of empowerment.  
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14 Many women expressed the encouragement and support from their peer helped them to cope and  
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16 'keep going', during difficult times. Triggers for breastfeeding cessation do not always stem from  
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18 issues with feeding techniques or problems with breastfeeding itself, but instead can evolve from  
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20 emotional or social triggers. <sup>27</sup>. When challenges arise, many women feel that making changes, such  
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22 as reducing, or even ceasing breastfeeding is one of the few resources within their control that can  
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24 bring about family well-being <sup>28</sup>. The high levels of emotional, as well as appraisal support reported  
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26 by the mothers in this study may have acted as a buffer to their stressors <sup>20</sup>, assisting them to  
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28 continue breastfeeding.  
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32 Women found the support convenient and accessible, with the schedule of calls, most frequent in  
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34 the early weeks and months, and less so from three to six months, considered 'about right', whilst  
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36 allowing for schedule flexibility. They appreciated the proactive nature of the support and the  
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38 additional ability to access their peer when they wanted. Less than half of the participants made  
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40 reactive contacts, and most only once or twice, with this contact mostly through text message.  
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42 Similar to findings of a recent UK study, the use of text messages was viewed positively by women<sup>29</sup>.  
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45 Less than a third of respondents were supported for the full six months, with the decision to cease  
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47 the support most frequently made together with the peer, or many mothers deciding themselves.  
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49 Dennis <sup>19</sup> reported a third of women did not maintain contact beyond two months with their peer,  
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51 and only 30% having some contact in the third and final month of support, She therefore concluded  
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53 that a standardised peer support intervention was unnecessary. Similarly, women in this study did  
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55 not necessarily need the full six months of support to gain the benefits, suggesting the length of  
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57 support should be flexible and tailored to the individual needs of each mother. On the other hand,  
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what was tested in the study was support following a suggested call schedule and implementing this intervention did result in increased breast milk feeding at six months compared with standard care.

## LIMITATIONS OF THIS STUDY

This study is limited by non-responders being less likely to have been breastfeeding at six months, compared to responders, and therefore these women may have been more dissatisfied with their experience.

## STRENGTH OF THE STUDY AND FURTHER RECOMMENDATIONS

This study is strengthened by the large number of participants, the description of the intensity of the support and the use of qualitative data to assess the validity of the quantitative findings in the context of an RCT where the intervention improved breastfeeding rates at six months. Rigour was achieved in qualitative data analysis through the involvement of different research team members in development of codes and themes, discussions and reaching consensus. Participant quotes have been used to embody the themes, thus ensuring credibility. If implementing a program of telephone-based peer support, recommendations should include a regular yet flexible support schedule that can be tailored to suit the individual mother. The use of text messages by peers could be used as complementary to, or occasionally instead of, calls in an effort to establish or maintain contact with mothers who may be finding difficulty making time.

## CONCLUSION

In view of the improved breastfeeding outcomes of women who received the proactive telephone-based peer support in the RUBY RCT, and their positive experiences of receiving the proactive telephone-based peer support, there is evidence to support the scale up of this model. Providing accessible, proactive support for breastfeeding via telephone is an important resource for women. While women valued the information their peer provided, so too they benefited from the empathy, reassurance and encouragement. Recommendations to enhance and facilitate communication

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between the peer and the mother, include ensuring flexibility in the scheduling of calls and the use of text messages in conjunction with proactive calls, tailored to meet the individual needs of the mother.

**Acknowledgments:** The authors thank the women who participated in the study, the peer supporters and the research staff.

**Study Protocol:** BMC Pregnancy Childbirth. 2014 May 28;14:177. doi: 10.1186/1471-2393-14-177. as a supplementary file.

**Authors contribution:** All authors were involved with the design of the study and the data collection tool. FMcL was responsible for the collection of the data. All authors had full access to all the data, were responsible for the integrity of the data and were involved in the analysis and interpretation of the data. FMcL took the lead in writing the manuscript with DF, HMcL and TS providing critical feedback and editing to the final version of the manuscript.

**Funding Statement:** This work was supported by philanthropic funding from the Felton Bequest, grant number CT 13442, and La Trobe University.

**Competing interests statement:** The authors have no competing interests to declare.

**Disclaimer:** The views expressed are those of the authors and independent of the funding body.

**Ethics Approval:** This study obtained ethics approval from La Trobe University (HEC 12-082), Royal Women’s Hospital (HREC 12/25), Monash Medical Centre (HREC 12251B) and Western Health (HREC/12/WH/107). Women who chose to participate provided written consent as part of the RUBY RCT.

**Provenance and peer review:** Not commissioned; externally peer reviewed.

Data sharing statement: No additional data are available.

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For peer review only

Mother ID

Date / /   
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ringing up about  
breastfeeding

RUBY study

Exploring your views and experiences of telephone support

Thank you again for being a part of the RUBY study.

As with the other questionnaires for the study, we are interested in your views and experiences no matter what they are – there are no right or wrong answers.

If there are any questions you would prefer to not answer just skip these and move on to the next question.



For peer review only

**Did you receive phone calls about breastfeeding from a volunteer mother?**

- ☐ 1 Yes
- ☐ 2 No

**On average how often did you receive calls from your volunteer mother in the first three months?**

- ☐ 1 Twice weekly
- ☐ 2 Weekly
- ☐ 3 Fortnightly
- ☐ 4 Monthly
- ☐ 5 It varied (please describe)

**On average how often did you receive calls from your volunteer mother after the first three months?**

- ☐ 1 Twice weekly
- ☐ 2 Weekly
- ☐ 3 Fortnightly
- ☐ 4 Monthly
- ☐ 5 It varied (please describe)

**When did the calls from your volunteer mother stop?**

- ☐ 1 .....months after the birth
- ☐ 2 Still receiving calls (Go to question 6)

**If the calls have stopped, who decided to stop the calls?**

- ☐ 1 I decided
- ☐ 2 Volunteer mother decided
- ☐ 3 We agreed together
- ☐ 4 Don't remember

**How did you feel about the frequency of the calls you received?**

- ☐ 1 About right
- ☐ 2 Too often
- ☐ 3 Not often enough (I would have liked more calls)

**On average how long did these calls last?**

- ☐ 1 0-5 minutes
- ☐ 2 6-10 minutes
- ☐ 3 11-20 minutes
- ☐ 4 Longer than 20 minutes
- ☐ 5 It varied (please describe)

**What things did you talk about with the volunteer mother? (tick all that apply)**

- ☐ 1 Baby attaching onto the breast
- ☐ 2 Baby behaviour
- ☐ 3 Lack of sleep
- ☐ 4 She advised me where to get help
- ☐ 5 Settling my baby
- ☐ 6 My milk supply
- ☐ 7 How often to feed my baby
- ☐ 8 Nipple or breast pain
- ☐ 9 She reassured me
- ☐ 10 Baby sleep/wake patterns
- ☐ 11 Support from my family
- ☐ 12 Baby care
- ☐ 13 She gave me emotional support
- ☐ 14 My emotional wellbeing
- ☐ 15 Other (please describe)

**We want to know how helpful you found these calls. Overall on a scale of 1 (Not at all helpful) to 5 (very helpful) how would you describe the telephone support you received?**

(please circle option that best describes your view)

Not at all helpful      1      2      3      4      5      Very helpful

**Was there anything you found particularly positive (helpful) about these calls?**

- ☐ 1 No
- ☐ 2 Yes (please describe)

**Was there anything you found particularly negative (not helpful) about these calls?**

- ☐ 1 No
- ☐ 2 Yes (please describe)

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**Did you ever call the volunteer mother yourself?**

- ☐ 1 Yes
- ☐ 2 No

**Did you ever contact the volunteer mother yourself in another way?**

- ☐ 1 No
- ☐ 2 Text message (SMS)
- ☐ 3 Email
- ☐ 4 Other (please describe)

**If you contacted your volunteer mother, can you recall the number of times you contacted her?**

times

**What was the reason/s you contacted her?**

**Would you recommend this type of telephone support to other new mothers?**

- ☐ 1 Yes
  - ☐ 2 No
- Please comment

**This section of the questionnaire was developed to help you tell us more about your peer support experience. This instrument has three subscales, all of which evaluate different aspects of the support you received.**

### Directions:

In answering the following questions, please think about your peer support experience. The following questions ask you to pick a number which best describes your feelings. While you may not find an answer that exactly matches your feelings, please indicate the number which comes closest to how you feel.

1	2	3	4	5
Strongly disagree	Disagree	Unsure	Agree	Strongly agree

Example: My peer listened to me talk about my feelings or concerns    1   2   3   4   **5**

*When answering these questions think specifically about the interactions you had with your peer volunteer.*

In general, my peer:		Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1	Provided me with practical information	1	2	3	4	5
2	Listened to me talk about my feelings or concerns	1	2	3	4	5
3	Helped me feel that I was not alone in my situation	1	2	3	4	5
4	Gave trustworthy advice	1	2	3	4	5
5	Helped me feel that what I was going through was "normal"	1	2	3	4	5
6	Expressed interest and concern about how I was doing	1	2	3	4	5
7	Told me that I did something well	1	2	3	4	5
8	Assisted me to solve my problems or concerns	1	2	3	4	5
9	Expressed admiration for a personal quality of mine	1	2	3	4	5
10	Told me what to expect in a certain situation	1	2	3	4	5
11	Accepted me for who I was	1	2	3	4	5
12	Gave me feedback on how I was doing	1	2	3	4	5
13	Told me what was usual for my current situation	1	2	3	4	5
14	Suggested other ways of doing things	1	2	3	4	5
15	Told me that help was available when I needed it	1	2	3	4	5

## Part II: Relationship Qualities

When answering these questions think specifically about the relationship you had with your peer volunteer.

In general:		<i>Strongly disagree</i>	<i>Disagree</i>	<i>Unsure</i>	<i>Agree</i>	<i>Strongly agree</i>
1	With my peer I could confide my most inner feelings	1	2	3	4	5
2	My peer could tell when I was worried about something	1	2	3	4	5
3	If something important happened to me I could share the experience with my peer	1	2	3	4	5
4	I knew that whatever I said was just between us	1	2	3	4	5
5	My peer was trustworthy	1	2	3	4	5
6	My peer was dependable	1	2	3	4	5
7	I knew my peer would respond to me in a supportive way	1	2	3	4	5
8	I felt accepted by my peer	1	2	3	4	5
9	I felt comfortable 'just being myself' with my peer	1	2	3	4	5
10	My peer understood my point of view	1	2	3	4	5
11	My peer felt bad if things didn't go well for me	1	2	3	4	5
12	My peer influenced how I felt or acted	1	2	3	4	5
13	I felt close to my peer	1	2	3	4	5
14	I felt comfortable getting close to my peer	1	2	3	4	5
15	I depended on my peer	1	2	3	4	5
16	My peer invested time to help me	1	2	3	4	5
17	My peer worked at maintaining a relationship with me	1	2	3	4	5
18	My peer was an important source of support for me	1	2	3	4	5
19	I looked forward to talking with my peer	1	2	3	4	5
20	My peer would get over-involved in my problems	1	2	3	4	5
21	My peer pressured me to change	1	2	3	4	5
22	My peer made me feel guilty	1	2	3	4	5
23	My peer made me feel angry	1	2	3	4	5
24	My peer was critical of me	1	2	3	4	5
25	My peer minimised my problems	1	2	3	4	5
26	My peer was interesting and enjoyable to talk to	1	2	3	4	5
27	My peer presented a good first impression	1	2	3	4	5
28	My peer revealed personal information	1	2	3	4	5
29	My peer talked too much	1	2	3	4	5
30	My peer was sensitive and understanding	1	2	3	4	5
31	My peer seemed like she would be able to talk to anyone	1	2	3	4	5

### Part III: Satisfaction with Support Received

When answering these questions think specifically about how satisfied you feel about the support you received.

#### In general:

*Strongly disagree*      *Disagree*      *Unsure*      *Agree*      *Strongly agree*

1	My peer provided the assistance I needed	1	2	3	4	5
2	My peer met my expectations	1	2	3	4	5
3	I liked my peer	1	2	3	4	5
4	My peer was respectful to me	1	2	3	4	5
5	Receiving support from my peer was convenient for me	1	2	3	4	5
6	I was able to talk to my peer when I needed to	1	2	3	4	5
7	My peer telephoned when planned	1	2	3	4	5
8	I had enough contact with my peer	1	2	3	4	5
9	I liked the support over the telephone	1	2	3	4	5
10	I had very few problems with the support I received	1	2	3	4	5
11	There is nothing I would have liked done differently	1	2	3	4	5
12	I would recommend this type of support to a friend	1	2	3	4	5
13	For my situation one-to-one support was better than group support	1	2	3	4	5
14	Overall, I am satisfied with my peer support experience	1	2	3	4	5

**Are there any other comments that you would like to make about telephone support from volunteer mothers, or any other comment about the study?**

**We are interested in conducting a small number of face to face interviews with women who have received support from a volunteer as part of the RUBY study. These interviews would take place at a time and place convenient to you. Please indicate below if you would be happy to be contacted by our research team to discuss the possibility of taking part in an interview.**

☐ Yes, I would like to take part in an interview about my experience of support during the RUBY study and am happy to be contacted.

☐ No, I do not wish to be contacted about an interview.

Thank you very much for completing this questionnaire. We are very grateful for the time you have taken. If you misplace the reply paid envelope we would appreciate you returning this questionnaire to:

**Fiona McLardie-Hore  
RUBY study trial coordinator  
Midwifery and Maternity Services Research  
The Royal Women's Hospital  
Locked Bag 300  
Parkville Vic 3052**

# BMJ Open

## Proactive telephone-based peer support for breastfeeding: a cross-sectional survey of women's experiences of receiving support in the RUBY randomised controlled trial

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2020-040412.R2
Article Type:	Original research
Date Submitted by the Author:	14-Sep-2020
Complete List of Authors:	McLardie-Hore, Fiona; Royal Women's Hospital, Midwifery and Maternity Services Research; La Trobe University, Judith Lumley Centre McLachlan, HL; La Trobe University, Judith Lumley Centre; La Trobe University, School of Nursing and Midwifery Shafiei, Touran; La Trobe University, Judith Lumley Centre Forster, Della; La Trobe University, Judith Lumley Centre; Royal Women's Hospital, Maternity Services
<b>Primary Subject Heading</b>:	Public health
Secondary Subject Heading:	Nutrition and metabolism
Keywords:	PUBLIC HEALTH, Maternal medicine < OBSTETRICS, EPIDEMIOLOGY

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# Proactive telephone-based peer support for breastfeeding: a cross-sectional survey of women's experiences of receiving support in the RUBY randomised controlled trial

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**Word count:** 4647

**Abstract:** 296

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**ABSTRACT**

**Objective** The RUBY randomised controlled trial (RCT) of proactive telephone-based peer support for breastfeeding found that infants of women allocated to the intervention were more likely to be receiving breast milk at six months of age than those receiving usual care. This study explores women’s experiences of receiving the RUBY peer support intervention.

**Design** Cross-sectional survey

**Setting** Women were recruited from the postnatal units of three tertiary hospitals in Melbourne, Australia.

**Participants** Women allocated to receive telephone peer support in the RUBY RCT who completed a telephone interview at six months postpartum (501/574 [87%] in trial intervention arm) were invited to complete a postal survey on their experience of receiving support.

**Outcomes** Experiences of support from the allocated peer, perceived helpfulness, topics discussed, overall satisfaction with the support, and frequency and duration of contact were explored.

**Results** Surveys were sent between August 2013 and March 2016, and 72% (360/501) responded of whom 341 recalled receiving peer support. Women reported high levels of perceived helpfulness (79%) and overall satisfaction with the peer support (93%). Discussions included breastfeeding topics (milk supply, attachment), baby care, baby behaviour, and reassurance and emotional support. Women valued the practical and realistic support from another mother, as well as the proactive nature, continuity and accessibility of the support. The empathy, reassurance and encouragement provided helped the mothers to ‘cope’, to continue breastfeeding, and to feel empowered.

**Conclusion** Most respondents were positive about their experience of receiving proactive telephone peer support for breastfeeding, further supporting the roll-out of this model as a strategy for increasing breastfeeding maintenance to six months. Recommendations include flexibility in the scheduling of calls according to individual need, and the use of text messages in conjunction with proactive calls, to enhance and facilitate communication between the peer and the mother.

**Keywords** breastfeeding, telephone, peer support

**Trial registration:** ACTRN12612001024831

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- The study was conducted as part of a large systematically conducted randomised controlled trial, increasing the study rigour
- Qualitative data have been used to support and enhance understanding of quantitative data
- The use of a validated tool, Peer Support Evaluation Inventory (PSEI) to explore mother's experiences strengthens this study
- The study was restricted to primiparous women, from metropolitan Melbourne, Australia
- The PSEI tool was added to the survey after the first 207 surveys had been distributed, resulting in fewer responses to this section

## INTRODUCTION

### Background

Despite the significant health and economic benefits of breastfeeding<sup>1,2</sup> effective strategies to increase breastfeeding maintenance in high-income countries have proven complex. Breastfeeding duration in most high-income countries remains shorter compared to low-income countries<sup>2</sup> and shorter than the World Health Organization recommendations.<sup>3</sup> Increasing the rates of breastfeeding worldwide is fundamental to achieving the United Nations Sustainable Development Goals by 2030.<sup>4</sup> The most recent Cochrane review on support for healthy breastfeeding mothers and healthy term babies found evidence of the value of face-to-face support from health professionals to increase breastfeeding<sup>5</sup>, however this is an expensive option at a population level, particularly if the

1 intervention needs to be maintained for up to six months postpartum. Programs of peer support for  
2 breastfeeding, whilst less costly than professional support, have varied greatly in their timing, mode  
3 of delivery, and length of support, producing mixed results, with the more effective programs being  
4 in low-income settings.<sup>5</sup>

5 Telephone peer support is another potentially effective, sustainable and cost-effective intervention,  
6 however the Cochrane review found no association between (predominantly) telephone peer  
7 support and increased breastfeeding maintenance.<sup>5</sup> Since that review, a large Australian RCT of 1152  
8 women 'Ringing up about breastfeeding early' (RUBY) found a positive association between  
9 receiving proactive (volunteer) peer support by telephone, and an increase in any breastfeeding at  
10 six-months postpartum (intervention 75%, usual care 69%).<sup>6</sup> Conducted between 2013 and 2016,  
11 participants in the RUBY trial were first time mothers, recruited after birth, prior to discharge from  
12 hospital. Women allocated to the intervention arm of the trial received standard postnatal care and  
13 breastfeeding support in hospital and in the community, along with proactive telephone-based  
14 support from an allocated peer volunteer, who had themselves breastfed for at least six-months,  
15 and who received four hours of training.<sup>7</sup> A total of 230 peer volunteers provided the intervention  
16 in the RUBY RCT, supporting on average two mothers each. Volunteer training and experiences have  
17 been reported elsewhere and will not be discussed in this paper<sup>8,9</sup> For those allocated to the  
18 intervention, the peer calls were scheduled twice in the first week after birth, weekly until 12 weeks  
19 postpartum and then three to four weekly until six-months postpartum, with the participant able to  
20 contact the peer between scheduled calls. The calls focused on the mother's breastfeeding  
21 experience as well as mother and infant wellbeing, with peers referring mothers to additional  
22 services as needed. More detail is available in the study protocol.<sup>7</sup>

23 Proactive telephone support, provided by women who have themselves breastfed for at least six  
24 months, is an intervention that is potentially well suited for scale-up in many countries, with pre-  
25 existing consumer-led breastfeeding associations a possible base for such an intervention. Most of  
26 these organisations currently require women to actively seek the support themselves. Whilst this  
27 may be of great benefit to the many women who actively engage with these organisations, it is not

necessarily the best option for women who wish to breastfeed but are less motivated or have lower self-efficacy. Women whose infants are likely to benefit most from breastfeeding support are the least likely to access it.<sup>5 10</sup> It is for these reasons the proactive telephone support model is potentially a powerful and scalable intervention at a population level.

It is imperative for organisations implementing a proactive peer support intervention for breastfeeding to understand the consumer experience to ensure programs are acceptable, accessible, responsive and provide improved outcomes.<sup>11</sup> Current literature describing mothers' experiences of proactive breastfeeding support programs is mainly limited to a few relatively small studies in Sweden<sup>12</sup> (proactive, telephone-based professional support), the United Kingdom<sup>13-16</sup> (predominantly face to face peer support models) and Australia<sup>17 18</sup> (mixture of peer/professional support face to face). Dennis'<sup>19 20</sup> Canadian study of the effect of proactive telephone-based peer support on breastfeeding, on which the RUBY study was based, reports maternal experiences including high rates of overall satisfaction and satisfaction with 'enough peer contact to help them with breastfeeding'. Given the paucity of literature reporting how, and what women experience in a proactive telephone-based peer support model, this cross-sectional study aimed to explore women's experiences of receiving the RUBY peer support intervention.

## Rationale

This nested sub-study of the larger RUBY RCT aimed to evaluate the interventions from the participant perspective, a secondary aim of the RUBY trial.<sup>7</sup> In a model of proactive telephone-based peer support, which produced positive breastfeeding outcomes, it is important to understand how, and what, supportive interactions the participants experienced and their views of this support. These perspectives can inform the frameworks and development, of future peer support programs.

## METHODS

### Study design

1 All women in the intervention arm of the RUBY RCT who completed the six-month telephone  
2 interview were invited to complete a postal survey (Appendix), which was specifically designed to  
3 explore their experiences of receiving peer support.

4 **Patient public involvement**

5 Representatives of the Australian Breastfeeding Association (<https://www.breastfeeding.asn.au/>),  
6 the largest breastfeeding advocacy group in Australia, were members of the RUBY research team  
7 and were involved in the design of the survey and training of the peer volunteers.

8 **Data collection**

9 Data collection for the RUBY study occurred at three time points; face to face at recruitment, by  
10 telephone at six months post birth, and by postal survey (intervention group only) following the six-  
11 month interview. <sup>7</sup> Participant characteristics, breastfeeding intention, mothers' perceptions of  
12 family views of her breastfeeding plans, and perceived level of family and friends support for  
13 breastfeeding were collected at recruitment. Infant feeding outcomes were collected at the six-  
14 month interview. Women allocated to the intervention (n=574), and who completed the six-month  
15 interview (n=501), were sent a postal survey between August 2013 and March 2016 which explored  
16 their views and experiences of telephone support. Following the initial postal survey invitation, a  
17 reminder letter and a second invitation to complete the postal survey were sent to non-responders  
18 at three and six weeks respectively.

19 Women were asked to respond to a series of questions regarding the frequency and average length  
20 of the calls from their peer, the period over which the support was received, other type of contact  
21 with their peer, and topics discussed during the calls. Participants were also asked to describe how  
22 helpful they found the calls on a five-point Likert-type scale where 1 = 'Not at all helpful' and 5 'Very  
23 helpful'. After the surveys had been sent to 263 women, it was decided to add a validated tool ('Peer  
24 Support Evaluation Inventory'<sup>21</sup> [PSEI]) to the subsequent surveys, to gain a broader understanding  
25 of why the peer support may have been helpful (if it was). Of the 238 women sent surveys after the

inclusion of the PSEI, 152 responded. The PSEI was chosen as being a good fit, however following ethics review and advice, in order to minimise respondent burden, it was decided that only three of the original four most relevant subscales of the PSEI would be used. The instructions for the PSEI specifically state that each subscale of the PSEI can be used independently. We therefore chose to use: Mother's perceptions of supportive interactions, Maternal satisfaction with support received, and Maternal perceptions of relationship qualities. We did not include Maternal perceptions of perceived benefits. The self-report tool invites participants to respond to a series of statements to evaluate the mother's perceptions of supportive interactions, relationship qualities, and satisfaction with the support experience using a five-point Likert-type scale from 1= 'Strongly disagree' to 5= 'Strongly agree'.

## Data analysis

Survey responses were entered onto Redcap and downloaded to Stata Statistical Software 14 (Statacorp.,2015) for data cleaning and analysis. Participant characteristics, breastfeeding plans and perception of support for breastfeeding were analysed using descriptive statistics, frequencies, percentages and comparisons between groups examined using Pearson's chi-squared to compare categorical variables and t-tests for continuous variables. The responses to the PSEI were dichotomised into 'Agree' (score 4= 'Agree' or 5= 'Strongly agree') or 'Disagree' (score 1='Strongly disagree' to 3= 'Unsure') and subsequently analysed using frequencies and percentages.

Content analysis was used for open-ended, short answer responses to questions about positive and negative aspects of calls, with codes derived from the text and organised into categories and then themes.<sup>22</sup> Codes were read and discussed between research team members FMCL and DF, with categories and themes developed and agreed upon."

Longer open-ended responses were thematically coded using the Attride-Stirling analytic tool <sup>23</sup> with basic themes systematically abstracted from the data and grouped into similar categories (organising themes). Inductive analysis of these organising themes provides greater understanding of the overall meaning of the data through the development of global themes. The basic, organising and global

themes were discussed between research team members FMcL, HMcL at each stage and consensus reached. Direct quotes from participants were used to illustrate the themes, with quotes contextualised by participant identification number, age, length of breastfeeding (bf) in months, length of peer support (ps) in months, and country of birth.

RESULTS

Participants

In total 360 of the 501 (72%) women sent a postal survey responded. Of these, 341 stated that they had received calls from a peer, whilst 19 women stated they did not receive the calls and subsequently did not complete any further responses. These 19 women are therefore included in Table 1 only. Table 1 describes the characteristics of both respondents and non-respondents to the postal survey, including women’s perceptions of breastfeeding support from family and friends. Over half the participants were born in Australia, with most speaking English as a first language. Of those born overseas, China, India, and the United Kingdom were the most frequently reported country of origin, with 48 other countries of birth reported. At recruitment, women were asked to rate the level of breastfeeding support they perceived they had from family and friends, with the majority of participants responding, ‘A lot of support’ (73%).

Women who did not respond to the survey were younger , less likely than respondents to be married or live with a partner , have completed a degree or higher , have English as their first language , and more likely to have a pension or benefit as their main income , have a low income, be born overseas , have smoked pre-pregnancy . Their infants were more likely to be lower gestation, have received infant formula prior to recruitment and less likely to be receiving any breast milk, or only breast milk, at six months. (Table 1)

Table 1: Participant characteristics

At recruitment to RUBY RCT	Respondents (n=360*)		Non-respondents (n=141)		P value
Maternal age at recruitment to RCT (years) mean (SD)	31.9	4.6 (sd)	29.2	5.4 (sd)	<0.001
	n	%	n	%	
Married or living with partner	349	96.9	130	92.2	0.02

Education level graduate degree or higher	256	71.3	71	50.4	<0.001
Household weekly income pre-tax (\$AUD)					< 0.001
Less than \$1400	83	23.0	65	46.1	
\$1400 or more	243	67.5	52	36.1	
Declined to answer	34	9.4	24	17.0	
Pension or benefit n=359	10	2.8	20	14.2	<0.001
Born in Australia	192	53.3	56	39.7	<0.006
English as first language	245	68.1	70	49.7	<0.001
Smoked pre-pregnancy	37	10.2	28	19.9	0.01
Caesarean birth	95	26.4	47	33.3	0.12
Baby gestation at birth (weeks) mean (SD)	39.6	1.2(sd)	39.3	1.1 (sd)	0.01
Birthweight (grams) mean (SD)	3401.7	445.7 (sd)	3367.4	459.9 (sd)	0.44
Baby admitted to neonatal/special care nursery	24	6.7	6	4.3	0.31
Baby had formula since birth, prior to recruitment to RUBY RCT	62	17.2	40	28.4	0.005
Plans to breastfeed 6 months or more	281	78.1	113	80.1	0.19
Level of breastfeeding support from family and friends					0.81
No support	4	1.1	3	2.1	
A little support	33	9.2	14	9.9	
Moderate support	62	17.2	22	15.6	
A lot of support	261	72.5	105	74.5	
<b>Breastfeeding outcomes at 6-month interview</b>					
Any breast milk	293	81.4	83	58.7	<0.001
Only breast milk (may include solids)	216	60.0	52	36.9	<0.001

\*Includes 19 participants who returned survey but did not receive ongoing calls

## Peer support contacts

Of the 360 returned surveys, 341 (95%) participants reported receiving one or more contact/s from their peer. Table 2 shows the peer support contact frequency and duration reported by participants.

Over half the women (56%) received weekly calls from their peer in the first three months after birth, as per the planned schedule of calls, with 17% receiving less frequent calls and 20% reporting the call frequency varied. Between three and six months, 42% of women received calls second weekly or more often, 27 % received monthly calls and 33% reported calls varied. Most (85%) reported the frequency of calls was 'About right', with only 5% reporting they were 'Not often enough'. Approximately one third of women reported that the length of calls was 6-10 minutes on average, and another third reported they were 11-20 minutes. Asked 'When did the calls from the volunteers stop?' over half the women reported ceasing prior to 26 weeks, 32% stated *at* 26 weeks (as per the intervention schedule), and 14% reported after 26 weeks. In terms of who decided to

1 stop the calls, 38% of women 'Agreed together' with the peer, 22% stated the 'Peer decided', and  
 2 19% said 'I decided'.  
 3  
 4 Other contact with their peer  
 5  
 6 Approximately 40% of respondents had called their peer (reactive contact) between the scheduled  
 7 calls, and 63% made contact in other ways, mostly by text message. When asked the reasons for  
 8 initiating contact, participant's responses included 'returning or rescheduling a call' (n=113/213,  
 9 53%), for 'breastfeeding advice' (n=58/213, 27%) or to 'touch base and update progress' (n=35/213,  
 10 16%). Responding to how many contacts they initiated, most commonly women initiated only one or  
 11 two contacts themselves.

**Table 2: Frequency and duration of contact with peer volunteer**

<b>On average how often did you receive calls from your volunteer in the first 3 months? n=341</b>	<b>n</b>	<b>%</b>
Twice weekly	22	6.5
Weekly	192	56.3
2nd weekly	53	15.5
Monthly	5	1.5
It varied	69	20.3
<b>On average how often did you receive calls from your volunteer after the first 3 months? n=331</b>	<b>n</b>	<b>%</b>
Twice weekly	8	2.5
Weekly	38	11.6
2nd weekly	90	27.5
Monthly	87	26.6
It varied	108	32.5
<b>How did you feel about the frequency of calls you received? n=332</b>	<b>n</b>	<b>%</b>
About right	283	85.3
Too often	33	9.9
Not often enough (I would have liked more calls)	16	4.8
<b>On average how long did these calls last? n=332</b>	<b>n</b>	<b>%</b>
0-5 minutes	43	13.0
6-10 minutes	105	31.6
11-20 minutes	108	32.5
Longer than 20 minutes	44	13.3
It varied	32	9.6
<b>When did the calls from your volunteer stop (in weeks)? n=317</b>	<b>n</b>	<b>%</b>
1	2	0.6
2- 4	27	8.5
5 - 8	28	8.8
9-12 weeks	15	4.7
13-16 weeks	35	11.0
17 – 20 weeks	30	9.5
21 – 25 weeks	35	11.0
26	100	31.5
Greater than 26 weeks	45	14.2

If the calls stopped who decided to stop the calls? n=295		n	%
We agreed together		111	37.6
Volunteer decided		64	21.7
I decided		57	19.3
Don't remember		48	16.3
Other		15	5.1
Did you ever call the volunteer yourself? n=335		n	%
Yes		137	40.9
Did you ever contact the volunteer yourself in another way? n=341		n	%
Yes		215	63.0
Other type of contact n=215			
Text message (Short Message Service)		201	93.4
Email		12	5.6
Other (e.g. Facebook, WhatsApp, WeChat, Post)		12	5.6
If you contacted your volunteer, can you recall the number of times? n=188		n	%
1		38	20.4
2		54	29.0
3		30	16.1
4		8	4.3
5		30	16.1
6 - 20		26	14.1

## Topics discussed with peer volunteer

Participants were asked 'What things did you talk about with the volunteer mother?', selecting from a number of pre-specified topics. 'Milk supply' (76%) was the most frequent response, with 'Baby behaviour' (74%) and 'Baby attaching to the breast' (72%) the next most frequent (Table 3).

**Table 3: Topics discussed with peer volunteer**

What things did you talk about with your peer volunteer? n=341	n	%*
Milk supply	259	76.0
Baby behaviour	251	73.6
Baby attaching to the breast	246	72.1
Reassured me	245	71.9
Nipple or breast pain	211	61.9
Advised me where to get help	207	60.7
Lack of sleep	195	57.2
How often to feed my baby	190	55.7
Baby sleep/wake patterns	187	54.8
Gave me emotional support	185	54.3
Settling my baby	161	47.2
Baby care	161	47.2
My emotional wellbeing	145	42.5
Support from my family	124	36.4
Other	47	13.8

## Positive and negative aspects of calls

1 Women were asked how helpful they would describe the telephone support they received overall,  
2 on a scale of '1' (Not at all helpful) to '5' (Very helpful), and 79% (n=261/330) of participants  
3 responded 'Helpful' to 'Very helpful', 12% responded '3' and 9% '1' to '2' (Not helpful). Asked to  
4 respond to the question "Did you find anything particularly positive (Helpful) about these calls?"  
5 87% (n=286/328) of participants responded 'Yes'. Further to this, 279 completed an open-ended  
6 response to describe what was positive. Content analysis was undertaken. Themes included having  
7 another mother knowing what she was going through (23%), receiving advice and guidance (15%),  
8 reassurance (13%) and that the peers were friendly and easy to talk to (13%).  
9 Women were also asked to respond to "Did you find anything negative (not helpful) about these  
10 calls?" and 15% (n=48/331) responded 'Yes'. Content analysis of these responses included there was  
11 limited advice (17%), difficulty finding time for the call (15%) and nothing to talk about (15%).

12 **Peer Support Evaluation Inventory**

13 The three subscales of the Peer Support Evaluation Inventory <sup>21</sup> were used to further understand  
14 the mothers' experience of support included 'Mother's perceptions of supportive interactions',  
15 'Maternal satisfaction with support received' and 'Maternal perceptions of relationship qualities',  
16 with statements grouped under common domains. (Table 4)

17 **Table 4: Peer support evaluation inventory**

Maternal perceptions of supportive interactions					Domain mean
Domain	Subscale item	Agree – Strongly agree			
		n	%		
Emotional support	Listened to me talk about my feelings or concerns (n=152)	146	96.0		92.8%
	Helped me feel that I was not alone in my situation (n=151)	143	94.7		
	Expressed interest and concern about how I was doing (n=152)	144	94.7		
	Told me that help was available when I needed it (n=152)	138	90.8		
	Accepted me for who I was (n=152)	133	87.5		
Informational support	Provided me with practical information (n=152)	142	93.4		86.5%
	Gave trustworthy advice (n=152)	139	91.4		
	Assisted me to solve my problems or concerns (n=151)	134	88.7		
	Told me what was usual for my current situation (n=151)	129	85.4		
	Suggested other ways of doing things (n=150)	126	84.0		
	Told me what to expect in a certain situation (n=152)	115	75.6		
Appraisal support	Helped me feel that what I was going through was 'normal' (n=151)	144	95.4		86.1%
	Told me that I did something well (n=152)	134	88.2		

	Gave me feedback on how I was doing (n=149)	130	87.2		
	Expressed admiration for a personal quality of mine (n=151)	111	73.5		
Maternal satisfaction with support received					
Domain	Subscale item	Agree-Strongly agree n %		Domain mean	
General satisfaction	Overall, I am satisfied with my peer support experience (n=151)	140	92.7	82.5%	
	I would recommend this type of support to a friend (n=152)	135	88.8		
Perceived quality	My peer was respectful to me (n=151)	145	96.0	82.3%	
	I liked my peer (n=152)	141	92.8		
	My peer provided the assistance I needed (n=152)	127	83.6		
	My peer met my expectations (n=152)	123	80.9		
	There is nothing I would have liked done differently (n=148)	109	73.6		
	For my situation one-to-one support was better than group support (n=149)	100	67.1		
Convenience	I liked the support over the telephone (n=152)	129	84.3	80.3%	
	Receiving support from my peer was convenient for me (n=151)	122	80.8		
	I had very few problems with the support I received (n=149)	112	75.2		
Access	My peer telephoned when planned (n=149)	127	85.2	84.1%	
	I was able to talk to my peer when I needed to (n=149)	126	84.6		
	I had enough contact with my peer (n=149)	123	82.6		
Maternal perceptions of relationship qualities					
Theoretical perspective	Domain	Subscale item	Agree-Strongly agree n %		Domain mean *
Perceived peer responsiveness	Intimacy	If something important happened to me I could share the experience with my peer (n=152)	122	81.9	70.9%
		I knew that whatever I said was just between us (n=152)	116	76.3	
		My peer could tell when I was worried about something (n=152)	83	54.6	
	Trust	I knew my peer would respond to me in a supportive way (n=152)	139	91.4	87.6%
		My peer was trustworthy (n=149)	131	87.9	
		My peer was dependable (n=151)	126	83.4	
	Perceived acceptance	I felt accepted by my peer (n=151)	137	90.7	80.3%
		I felt comfortable “just being myself” with my peer (n=152)	132	86.8	
		With my peer I could confide my most inner feelings (n=150)	95	63.3	
	Empathy	My peer understood my point of view (n=152)	132	86.8	79.0%
		My peer felt bad if things didn’t go well for me (n=152)	108	71.1	

Nature and extent of interdependence	Attachment	I felt comfortable getting close to my peer (n=151)	101	66.9	46.5%
		I depended on my peer (n=150)	39	26.0	
	Close	I felt close to my peer (n=152)	90	60.5	57.6%
		My peer influenced how I felt or acted (n=150)	82	54.7	
Peer qualities	Commitment	My peer invested time to help me (n=152)	129	84.9	76.7%
		My peer worked at maintaining a relationship with me (n=151)	121	80.1	
		My peer was an important source of support for me (n=151)	108	71.5	
		I looked forward to talking with my peer (n=152)	107	70.4	
	Social competence	My peer presented a good first impression (n=151)	142	94.0	79.0%
		My peer was interesting and enjoyable to talk to (n=151)	137	90.7	
		My peer revealed personal information (n=149)	78	52.3	
	Social skills	My peer was sensitive and understanding (n=151)	136	90.1	61.6%
		My peer seemed like she would be able to talk to anyone (n=150)	127	84.7	
		My peer talked too much (n=152)	15	9.9	
Sentiment	Conflict	My peer minimised my problems (n=151)	43	28.5	9.6%
		My peer would get over-involved in my problems (n=150)	19	12.7	
		My peer made me feel guilty (n=152)	8	5.3	
		My peer was critical of me (n=147)	6	4.1	
		My peer pressured me to change (n=152)	6	3.9	
		My peer made me feel angry (n=152)	5	3.3	

\* Means calculated for the scale 'perceptions of relationship qualities' should be viewed in the context that some domains contained items which could be interpreted differently (positively or negatively) e.g. 'I depended on my peer' maybe be viewed as positive by some, but not others, thus an overall mean may not clearly indicate participant perceptions, thus we considered it inappropriate to reverse score these items.

Responses to statements regarding the mother's perceptions of the support from their peer are grouped as either *emotional*, *informational* or *appraisal* supportive interactions, according to three peer support domains<sup>24</sup>. Of these domains 'emotional' support received the most positive responses, with a mean of 93% agreeing with these statements. Responding to 'satisfaction with support' statements under the *general* domain, the majority of participants perceived their peer support experience as satisfactory overall (93%) and that they would recommend the type of support to a friend (89%). Participants also responded positively to the domains of *perceived quality*, in particular the statement 'My peer was respectful to me' Perceptions of their peer relationship

1 were also explored with statements under the theoretical perspectives of 'Perceived peer  
2 responsiveness' with participants responding most positively to statements in the domains of *trust*,  
3 and *perceived acceptance*.  
4 Less frequently endorsed were the domains of *attachment* and *close*, and the six statements within  
5 the *conflict* domain were infrequently agreed upon, with four of the statements [my  
6 peer]....'pressured me to change', 'made me feel guilty', 'made me feel angry' and 'was critical of  
7 me' being endorsed by less than 6% of respondents.

### 9 **Would mothers recommend this support to others?**

10 Women were asked if they would recommend this type of support to other new mothers, with 97%,  
11 (n=320/331) responding 'Yes'. They were given an opportunity to describe their response further,  
12 and 221 commented. Two global themes emerged from these responses. The first '*Yes, absolutely*'  
13 contained organisational themes of 'Empathetic, reassuring, non-judgemental support', "More than  
14 just breastfeeding support" and 'An easy way to be supported'. The second global theme of '*Yes,*  
15 *but....*' contained organisational themes of 'Recommend for those early days' and 'particularly for  
16 those who are isolated". These themes are discussed further below.

#### 18 **'Yes, absolutely'**

19 The greatest response to this question was that women said 'Yes, absolutely' they would  
20 recommend this support.

#### 21 *Empathetic, reassuring, non-judgemental support*

22 Women valued that their peer was an experienced mother who understood what they 'were going  
23 through' and was able to use this experience to support them. They appreciated that the peer  
24 provided a safe place to talk, someone outside their family and circle of friends who was unbiased  
25 and non-judgemental and was 'just for them'. Peers were sensitive, caring, empathetic, and were  
26 someone who would listen, they could talk to, and ask questions.

1 *Everyone throws their opinions and advice at you as a first-time mother so it's really*  
 2 *refreshing to have someone impartial to your family and friends circle to ask all the questions*  
 3 *under the sun that you may (and do!!) have! ( #1444, 38 yrs. bf-6mths, ps-5.5mths, England)*

4  
 5 *As a new mum in that first few weeks, it can be a particularly overwhelming experience. I*  
 6 *found it comforting to know that there was an unbiased support just a phone call away, and*  
 7 *when it got too difficult it was nice to have someone call in to check on you. (#1523, 36 yrs.*  
 8 *bf-6mths, ps-4.5mths, Malaysia)*

9  
 10 *It's good to speak to someone that has been through it before and understands the obstacles*  
 11 *you are going through. (#3139, 25 yrs. bf-6mths, ps-6mths, Australia)*

### 12 *More than just breastfeeding support*

13 Peers provided advice and guidance, not only on breastfeeding matters, but on many other issues  
 14 faced in the new mother's transition to parenthood and referred mothers to professional help as  
 15 needed. As well as providing practical support the peers offered emotional support, reassurance,  
 16 encouragement, affirmation and helped to normalise the new mother's experiences. The peer  
 17 'checking in', as well as being available for them to call, made the mothers feel secure and as though  
 18 they were 'not alone'.  
 19

20  
 21 *I think this type of support is fantastic. As a new mother having someone to ask questions*  
 22 *and receive advice from is crucial. Those first few weeks can be very hard finding positions to*  
 23 *feed, helping soreness, wondering if what's happening to you is normal and to have that*  
 24 *support was great. (#1204 27 yrs. bf-6mths, ps-3mths, Australia)*

25  
 26 *...it is useful to have someone in your corner without an agenda who can listen to your own*  
 27 *experience. (#1754 31 yrs. bf-6mths, ps-4mths, Australia)*

# 1 *An easy way to be supported*

2 The telephone was a quick and easy way for women to receive support, and the proactive nature of  
3 the calls made women feel like they didn't need to 'make an effort'. Women appreciated when the  
4 peer was flexible with the call schedule (frequency and time of day), with contact being made  
5 according to the individual needs of the mother. Women also liked the continuity of the support, as  
6 they enjoyed getting to know their peer, and didn't need to explain their story each time.

7  
8 *It was easier over the phone as we connect [sic] rather quickly and start to know each other*  
9 *personally and her kind words of encouragement helped me through..." (#3079 28 yrs. bf-*  
10 *6mths, ps-6mths, Australia)*

## 12 **'Yes, but....'**

13 A number of respondents said they would recommend the support but qualified the response by  
14 suggesting that the support would be best for certain groups of women.

15 *Recommend for those early days particularly for isolated mothers*

16 Many women felt the support was particularly vital in the early days of motherhood, for first time  
17 mothers, and that women who were isolated and had little family support would benefit the most.

18  
19 *...those first few weeks, seems like a lifetime, it helps with the overwhelm [sic] and isolation I*  
20 *felt, and gave me a sense of certainty amidst the chaos. I really looked forward to our chats. I*  
21 *often contacted her. (#1249 31 yrs. bf-6mths, ps-3mths, Australia)*

22  
23 *... especially helpful to new mothers who are new immigrants, it can make people feel like*  
24 *[they are] connected to the society and other people care about you. (#2038 29 yrs. bf-*  
25 *6mths, ps-6mths, China)*

26  
27 *...when you're really isolated... it was really nice feeling that someone cared how I was*  
28 *getting on, as all my family live interstate. (#1145 33 yrs. bf-6mths, ps-6mths, Australia)*

1  
2  
3 2 A small number of women weren't sure if they would recommend the support, explaining that they  
4  
5 3 experienced difficulties in finding time for the phone calls in this busy time with a new baby, whilst  
6  
7 4 others felt information from a non-professional was lacking.  
8  
9 5

10  
11 6 **Further comments**  
12

13 7 Participants were invited to make any further comments about the support, or the RUBY trial itself,  
14  
15 8 with 96%, (n=326/341) commenting. Many women expressed their overwhelming gratitude for  
16  
17 9 being a part of RUBY and for the help and support provided by their peer. Analysis of these  
18  
19 10 responses revealed the same themes of 'empathetic, reassuring non-judgemental support', 'more  
20  
21 11 than just breastfeeding support' and 'an easy way to be supported' as previously described.  
22  
23  
24  
25 12 In addition, a new theme that emerged was 'she helped and inspired me to become a proud,  
26  
27 13 confident mother'. Mothers talked about the peer investing their time, and through sharing their  
28  
29 14 experiences, the peer helped the mother to cope, 'keep going', trust her instincts and be proud of  
30  
31 15 herself as a new mother. Many women talked about how they felt empowered, their confidence  
32  
33 16 bolstered by the peer and how they were inspired to create a new breastfeeding goal.  
34  
35  
36

37 17 *It's been wonderful to share this unique journey with her over the 6 months. Breastfeeding is*  
38  
39 18 *a passion and commitment that we both feel strongly about and have enjoyed. She helped*  
40  
41 19 *me to feel proud and confident about breastfeeding my baby and achieving my goal of*  
42  
43 20 *breastfeeding for 6-12 months. (#1395 36 yrs. bf-6mths, ps-5.5mths, Japan)*  
44  
45

46 21 *I would like to thank the volunteer mother for taking the time to help a new mum. This is*  
47  
48 22 *time taken away from their own families to give support and encouragement to a total*  
49  
50 23 *stranger.... without the support from a volunteer mum I may have stopped breastfeeding in*  
51  
52 24 *the initial phases when everything felt too hard and overwhelming. (#1032 40 yrs. bf-6mths,*  
53  
54 25 *ps-6mths, Zambia)*  
55  
56

57  
58 26 *It was also due to the advice and support from my volunteer mum that I was able to*  
59  
60 27 *articulate and defend my reasons for exclusively breastfeeding until 6 months, my hope to*

1 *breastfeed my daughter until at least 24 months, to be able to breastfeed in public. (#1070*

2 *33 yrs. bf-6mths, ps-6mths, New Zealand)*

3 A small number of women stated that this type of support was not suited to them, mainly due to  
4 difficulties establishing contact and coordinating calls during the busy early days, or some feeling  
5 that the calls added to their stress as a new mother.

## 6 DISCUSSION

7 This paper provides insight into the views and experiences of first-time mothers' receiving proactive  
8 telephone peer support for breastfeeding, in the context of an RCT in which the intervention tested  
9 increased breastfeeding. Whilst perceiving high levels of breastfeeding support from family and  
10 friends, women still valued the support from the peers, reporting high levels of helpfulness and  
11 overall satisfaction with the support. Women viewed their experiences as positive and felt the  
12 responsive support helped them to manage the many challenges faced in their transition to  
13 motherhood. Peers shared their experiential knowledge and provided realistic, practical advice,  
14 information, and guidance on issues such as breast milk supply, attachment and nipple pain, but also  
15 assured the mothers that much of their experience was 'normal', and similar to what others had  
16 'gone through', which women found affirming and helped them to 'cope'. Findings reinforce  
17 evidence that women view the support as beyond simply breastfeeding support, providing  
18 reassurance and empowerment<sup>14 25</sup> increasing their confidence<sup>26</sup> and reducing their feelings of  
19 isolation.<sup>24</sup>

20 Similar to the findings reported by McInnes<sup>27</sup> mothers valued an avenue to ask questions and  
21 someone to listen to them without judgement, someone accepting of them and someone with  
22 personal experience who understood what they were going through. In this study women described  
23 the peers as friendly, caring, understanding and accepting. Having a single peer providing support  
24 was important to the mothers, as they built a trusting relationship over the period of contact, with  
25 many women feeling comfortable enough to contact the peer if needed, yet most did not report  
26 feeling dependent upon their peer. In the 2010 study of peer support for postpartum depression,

1 Dennis <sup>24</sup> suggested a lack of dependence was associated with women who did not need extra  
2 support, or who only needed it for a short period of time, however in this study many women  
3 expressed that they felt inspired, gained confidence and were proud of themselves as a mother, and  
4 thus a lack of dependence on the peer, might be seen as an expression of empowerment.  
5 Many women expressed the encouragement and support from their peer helped them to cope and  
6 'keep going', during difficult times. Triggers for breastfeeding cessation do not always stem from  
7 issues with feeding techniques or problems with breastfeeding itself, but instead can evolve from  
8 emotional or social triggers. <sup>28</sup>. When challenges arise, many women feel that making changes, such  
9 as reducing, or even ceasing breastfeeding is one of the few resources within their control that can  
10 bring about family well-being <sup>29</sup>. The high levels of emotional, as well as appraisal support reported  
11 by the mothers in this study may have acted as a buffer to their stressors <sup>21</sup>, assisting them to  
12 continue breastfeeding.  
13 Women found the support convenient and accessible, with the schedule of calls, most frequent in  
14 the early weeks and months, and less so from three to six months, considered 'about right', whilst  
15 allowing for schedule flexibility. They appreciated the proactive nature of the support and the  
16 additional ability to access their peer when they wanted. Less than half of the participants made  
17 reactive contacts, and most only once or twice, with this contact mostly through text message.  
18 Similar to findings of a recent UK study, the use of text messages was viewed positively by women<sup>30</sup>.  
19 Less than a third of respondents were supported for the full six months, with the decision to cease  
20 the support most frequently made together with the peer, or many mothers deciding themselves.  
21 Dennis <sup>20</sup> reported a third of women did not maintain contact beyond two months with their peer,  
22 and only 30% having some contact in the third and final month of support, She therefore concluded  
23 that a standardised peer support intervention was unnecessary. Similarly, women in this study did  
24 not necessarily need the full six months of support to gain the benefits, suggesting the length of  
25 support should be flexible and tailored to the individual needs of each mother. On the other hand,  
26 what was tested in the study was support following a suggested call schedule and implementing this  
27 intervention did result in increased breast milk feeding at six months compared with standard care.

## **LIMITATIONS OF THIS STUDY**

This study is limited by non-responders being less likely to have been breastfeeding at six months, compared to responders, and therefore these women may have been more dissatisfied with their experience.

## **STRENGTH OF THE STUDY AND FURTHER RECOMMENDATIONS**

This study is strengthened by the large number of participants, the description of the intensity of the support and the use of qualitative data to assess the validity of the quantitative findings in the context of an RCT where the intervention improved breastfeeding rates at six months. Rigour was achieved in qualitative data analysis through the involvement of different research team members in development of codes and themes, discussions and reaching consensus. Participant quotes have been used to embody the themes, thus ensuring credibility. If implementing a program of telephone-based peer support, recommendations should include a regular yet flexible support schedule that can be tailored to suit the individual mother. The use of text messages by peers could be used as complementary to, or occasionally instead of, calls in an effort to establish or maintain contact with mothers who may be finding difficulty making time.

## **CONCLUSION**

In view of the improved breastfeeding outcomes of women who received the proactive telephone-based peer support in the RUBY RCT, and their positive experiences of receiving the proactive telephone-based peer support, there is evidence to support the scale up of this model. Providing accessible, proactive support for breastfeeding via telephone is an important resource for women. While women valued the information their peer provided, so too they benefited from the empathy, reassurance and encouragement. Recommendations to enhance and facilitate communication between the peer and the mother, include ensuring flexibility in the scheduling of calls and the use of text messages in conjunction with proactive calls, tailored to meet the individual needs of the mother.

1       1    Acknowledgments: The authors thank the women who participated in the study, the peer  
2  
3       2    supporters and the research staff.  
4  
5       3    Authors contribution: All authors were involved with the design of the study and the data collection  
6  
7  
8       4    tool. FMcL was responsible for the collection of the data. All authors had full access to all the data,  
9  
10      5    were responsible for the integrity of the data and were involved in the analysis and interpretation of  
11  
12      6    the data. FMcL took the lead in writing the manuscript with DF, HMcL and TS providing critical  
13  
14      7    feedback and editing to the final version of the manuscript.  
15  
16  
17  
18      8    Funding Statement: This work was supported by philanthropic funding from the Felton Bequest,  
19  
20  
21      9    grant number CT 13442, and La Trobe University.  
22  
23  
24  
25     10   Competing interests statement: The authors have no competing interests to declare.  
26  
27  
28  
29  
30     11   Disclaimer: The views expressed are those of the authors and independent of the funding body.  
31  
32  
33  
34     12   Ethics Approval: This study obtained ethics approval from La Trobe University (HEC 12-082), Royal  
35  
36  
37     13   Women’s Hospital (HREC 12/25), Monash Medical Centre (HREC 12251B) and Western Health  
38  
39     14   (HREC/12/WH/107). Women who chose to participate provided written consent as part of the RUBY  
40  
41     15   RCT.  
42  
43  
44  
45     16   Provenance and peer review: Not commissioned; externally peer reviewed.  
46  
47  
48  
49     17   Data sharing statement: All data relevant to the study are included in the article  
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1

For peer review only

Mother ID

Date / /   
Day/ month/ year



ringing up about  
breastfeeding

RUBY study

Exploring your views and experiences of telephone support

Thank you again for being a part of the RUBY study.

As with the other questionnaires for the study, we are interested in your views and experiences no matter what they are – there are no right or wrong answers.

If there are any questions you would prefer to not answer just skip these and move on to the next question.



For peer review only

**Did you receive phone calls about breastfeeding from a volunteer mother?**

- ☐ 1 Yes
- ☐ 2 No

**On average how often did you receive calls from your volunteer mother in the first three months?**

- ☐ 1 Twice weekly
- ☐ 2 Weekly
- ☐ 3 Fortnightly
- ☐ 4 Monthly
- ☐ 5 It varied (please describe)

**On average how often did you receive calls from your volunteer mother after the first three months?**

- ☐ 1 Twice weekly
- ☐ 2 Weekly
- ☐ 3 Fortnightly
- ☐ 4 Monthly
- ☐ 5 It varied (please describe)

**When did the calls from your volunteer mother stop?**

- ☐ 1 .....months after the birth
- ☐ 2 Still receiving calls (Go to question 6)

**If the calls have stopped, who decided to stop the calls?**

- ☐ 1 I decided
- ☐ 2 Volunteer mother decided
- ☐ 3 We agreed together
- ☐ 4 Don't remember

**How did you feel about the frequency of the calls you received?**

- ☐ 1 About right
- ☐ 2 Too often
- ☐ 3 Not often enough (I would have liked more calls)

**On average how long did these calls last?**

- ☐ 1 0-5 minutes
- ☐ 2 6-10 minutes
- ☐ 3 11-20 minutes
- ☐ 4 Longer than 20 minutes
- ☐ 5 It varied (please describe)

**What things did you talk about with the volunteer mother? (tick all that apply)**

- ☐ 1 Baby attaching onto the breast
- ☐ 2 Baby behaviour
- ☐ 3 Lack of sleep
- ☐ 4 She advised me where to get help
- ☐ 5 Settling my baby
- ☐ 6 My milk supply
- ☐ 7 How often to feed my baby
- ☐ 8 Nipple or breast pain
- ☐ 9 She reassured me
- ☐ 10 Baby sleep/wake patterns
- ☐ 11 Support from my family
- ☐ 12 Baby care
- ☐ 13 She gave me emotional support
- ☐ 14 My emotional wellbeing
- ☐ 15 Other (please describe)

**We want to know how helpful you found these calls. Overall on a scale of 1 (Not at all helpful) to 5 (very helpful) how would you describe the telephone support you received?**

(please circle option that best describes your view)

Not at all helpful      1      2      3      4      5      Very helpful

**Was there anything you found particularly positive (helpful) about these calls?**

- ☐ 1 No
- ☐ 2 Yes (please describe)

**Was there anything you found particularly negative (not helpful) about these calls?**

- ☐ 1 No
- ☐ 2 Yes (please describe)

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**Did you ever call the volunteer mother yourself?**

- ☐ 1 Yes  
☐ 2 No

**Did you ever contact the volunteer mother yourself in another way?**

- ☐ 1 No  
☐ 2 Text message (SMS)  
☐ 3 Email  
☐ 4 Other (please describe)

**If you contacted your volunteer mother, can you recall the number of times you contacted her?**

times

**What was the reason/s you contacted her?**

**Would you recommend this type of telephone support to other new mothers?**

- ☐ 1 Yes  
☐ 2 No  
Please comment

**This section of the questionnaire was developed to help you tell us more about your peer support experience. This instrument has three subscales, all of which evaluate different aspects of the support you received.**

### Directions:

In answering the following questions, please think about your peer support experience. The following questions ask you to pick a number which best describes your feelings. While you may not find an answer that exactly matches your feelings, please indicate the number which comes closest to how you feel.

1	2	3	4	5
Strongly disagree	Disagree	Unsure	Agree	Strongly agree

Example: My peer listened to me talk about my feelings or concerns      1   2   3   4   **5**

*When answering these questions think specifically about the interactions you had with your peer volunteer.*

In general, my peer:		Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1	Provided me with practical information	1	2	3	4	5
2	Listened to me talk about my feelings or concerns	1	2	3	4	5
3	Helped me feel that I was not alone in my situation	1	2	3	4	5
4	Gave trustworthy advice	1	2	3	4	5
5	Helped me feel that what I was going through was "normal"	1	2	3	4	5
6	Expressed interest and concern about how I was doing	1	2	3	4	5
7	Told me that I did something well	1	2	3	4	5
8	Assisted me to solve my problems or concerns	1	2	3	4	5
9	Expressed admiration for a personal quality of mine	1	2	3	4	5
10	Told me what to expect in a certain situation	1	2	3	4	5
11	Accepted me for who I was	1	2	3	4	5
12	Gave me feedback on how I was doing	1	2	3	4	5
13	Told me what was usual for my current situation	1	2	3	4	5
14	Suggested other ways of doing things	1	2	3	4	5
15	Told me that help was available when I needed it	1	2	3	4	5

1 **Part II: Relationship Qualities**

4 When answering these questions think specifically about the relationship you had with your peer volunteer.

In general:		Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1	With my peer I could confide my most inner feelings	1	2	3	4	5
2	My peer could tell when I was worried about something	1	2	3	4	5
3	If something important happened to me I could share the experience with my peer	1	2	3	4	5
4	I knew that whatever I said was just between us	1	2	3	4	5
5	My peer was trustworthy	1	2	3	4	5
6	My peer was dependable	1	2	3	4	5
7	I knew my peer would respond to me in a supportive way	1	2	3	4	5
8	I felt accepted by my peer	1	2	3	4	5
9	I felt comfortable 'just being myself' with my peer	1	2	3	4	5
10	My peer understood my point of view	1	2	3	4	5
11	My peer felt bad if things didn't go well for me	1	2	3	4	5
12	My peer influenced how I felt or acted	1	2	3	4	5
13	I felt close to my peer	1	2	3	4	5
14	I felt comfortable getting close to my peer	1	2	3	4	5
15	I depended on my peer	1	2	3	4	5
16	My peer invested time to help me	1	2	3	4	5
17	My peer worked at maintaining a relationship with me	1	2	3	4	5
18	My peer was an important source of support for me	1	2	3	4	5
19	I looked forward to talking with my peer	1	2	3	4	5
20	My peer would get over-involved in my problems	1	2	3	4	5
21	My peer pressured me to change	1	2	3	4	5
22	My peer made me feel guilty	1	2	3	4	5
23	My peer made me feel angry	1	2	3	4	5
24	My peer was critical of me	1	2	3	4	5
25	My peer minimised my problems	1	2	3	4	5
26	My peer was interesting and enjoyable to talk to	1	2	3	4	5
27	My peer presented a good first impression	1	2	3	4	5
28	My peer revealed personal information	1	2	3	4	5
29	My peer talked too much	1	2	3	4	5
30	My peer was sensitive and understanding	1	2	3	4	5
31	My peer seemed like she would be able to talk to anyone	1	2	3	4	5

### Part III: Satisfaction with Support Received

When answering these questions think specifically about how satisfied you feel about the support you received.

#### In general:

*Strongly disagree*      *Disagree*      *Unsure*      *Agree*      *Strongly agree*

1	My peer provided the assistance I needed	1	2	3	4	5
2	My peer met my expectations	1	2	3	4	5
3	I liked my peer	1	2	3	4	5
4	My peer was respectful to me	1	2	3	4	5
5	Receiving support from my peer was convenient for me	1	2	3	4	5
6	I was able to talk to my peer when I needed to	1	2	3	4	5
7	My peer telephoned when planned	1	2	3	4	5
8	I had enough contact with my peer	1	2	3	4	5
9	I liked the support over the telephone	1	2	3	4	5
10	I had very few problems with the support I received	1	2	3	4	5
11	There is nothing I would have liked done differently	1	2	3	4	5
12	I would recommend this type of support to a friend	1	2	3	4	5
13	For my situation one-to-one support was better than group support	1	2	3	4	5
14	Overall, I am satisfied with my peer support experience	1	2	3	4	5

**Are there any other comments that you would like to make about telephone support from volunteer mothers, or any other comment about the study?**

**We are interested in conducting a small number of face to face interviews with women who have received support from a volunteer as part of the RUBY study. These interviews would take place at a time and place convenient to you. Please indicate below if you would be happy to be contacted by our research team to discuss the possibility of taking part in an interview.**

☐ Yes, I would like to take part in an interview about my experience of support during the RUBY study and am happy to be contacted.

☐ No, I do not wish to be contacted about an interview.

Thank you very much for completing this questionnaire. We are very grateful for the time you have taken. If you misplace the reply paid envelope we would appreciate you returning this questionnaire to:

**Fiona McLardie-Hore  
RUBY study trial coordinator  
Midwifery and Maternity Services Research  
The Royal Women's Hospital  
Locked Bag 300  
Parkville Vic 3052**