

# The RUBY Breastfeeding Randomised Trial: A Mixed Methods Study of the Implementation of an Effective Breastfeeding Peer Support Intervention

Submitted by

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## Statement of authorship

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This thesis consists primarily of work by the author that has been published or accepted for publication as described in the text. Except where reference is made in the text of the thesis, this thesis contains no other material published elsewhere or extracted in whole or in part from a thesis submitted for the award of any other degree or diploma. No other person's work has been used without due acknowledgement in the main text of the thesis. This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

This thesis with publications, consists of ten chapters, and incorporates published manuscripts, of which, I am a co-author on one, and the primary author of three. I am also a co-author of the paper included in this thesis as **Appendix A**. This work was undertaken under the guidance of my supervisors:

- Professor Della Forster, Professor of Midwifery, Judith Lumley Centre, La Trobe University and the Royal Women's Hospital;
- Professor Helen McLachlan, School of Nursing and Midwifery and Judith Lumley Centre, La Trobe University; and
- Dr Touran Shafiei, Judith Lumley Centre, La Trobe University.

I made a substantial contribution to the three manuscripts of which I am first author, including the development, design, piloting and finalising of data collection tools, data collection, analysis and interpretation. Co-authors on the papers include my three supervisors; all have contributed to the overall study design, intellectual rigor and drafting and editing of the manuscripts. In relation to the manuscripts where I am a co-author, in my role as 'volunteer coordinator' on the RUBY RCT, I made a substantial collaborative contribution toward collection and analysis of data, drafting and editing of manuscripts, and dissemination of findings.

Heather Grimes

5<sup>th</sup> November 2021

# Abstract

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## Background

The RUBY randomised controlled trial (RCT) demonstrated that proactive telephone-based peer support was associated with increased breastfeeding to six months in primiparous women who birthed at one of three Australian hospitals. Women were randomised to receive either the peer support intervention for up to six months postpartum or ‘usual care’. The volunteer peers had themselves breastfed for at least six months and received four-hours of peer training. This thesis explores key factors in the implementation of the RUBY intervention, including data related to peers’ experiences and motivations for volunteering.

## Methods

A mixed methods design was used, comprising three components drawn from a range of data sources. Component 1, a process evaluation, examined aspects of implementation including recruitment, training and support of the peers, and topics discussed during calls. Component 2 comprised an online survey completed by volunteers after ceasing volunteering, which examined their motivation and experiences. Component 3 further explored the experiences and views of the peers using qualitative methods.

## Findings

The findings of this thesis demonstrate ease of peer recruitment and acceptability of the role to volunteers, who were highly motivated to support new mothers and described the role as personally rewarding. The role resonated with the volunteers’ beliefs in the value of breastfeeding support and enabled them to engage socially with new mothers. Peers viewed the support provided as unique and grounded in their direct experience of breastfeeding. Measures of intervention fidelity demonstrated the intervention was delivered as planned.

## Conclusion

The RUBY trial demonstrated that volunteer peer support is one of few strategies to increase breastfeeding duration. Upscaling of proactive peer support interventions relies on recruitment, training, and retention of motivated peers. This thesis presents insights into how this was achieved in the RUBY trial, and are important in terms of potential upscaling and sustainability of similar programs beyond the bounds of an RCT.

# Abbreviations

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ABA	Australian Breastfeeding Association
ACTRN	Australian New Zealand Clinical Trials Registry number
Adj RR	Adjusted relative risk
AUD	Australian dollar(s)
BF	Breastfeeding
BFHI	Baby Friendly Hospital Initiative (renamed Baby Friendly Health Initiative in 2006)
CALD	Culturally and linguistically diverse
CI	Confidence interval
DMC	Data Monitoring Committee
EBM	Expressed breast milk
GP	General practitioner
HR	Hazard ratio
MCHN	Maternal and Child Health Nurse
MMC	Monash Medical Centre
NHS	National Health Survey
RCT	Randomised controlled trial
RR	Relative Risk
RR	Risk Ratio
RUBY	Ringing Up about Breastfeeding earlyY
RWH	Royal Women's Hospital
Sd	Standard deviation
SES	Socioeconomic status
SH	Sunshine Hospital
SMS	Short message service
UNICEF	United Nations Children's Fund
USA	United States of America
UK	United Kingdom
WHO	World Health Organization

## Definitions

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Any breastfeeding	Infant receiving some breastmilk but can also receive other foods or liquids, including non-human milk.
Exclusive breastfeeding	Infant receiving nutrition only from breast milk, with the exception of oral rehydration solutions, vitamins, minerals or medicines
Lactation consultant	To be a Lactation Consultant in Australia, you must hold an International Board-Certified Lactation Consultant (IBCLC®) qualification.

## Acknowledgements

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Thank you to the RUBY research team, including the team members from the Australian Breastfeeding Association, for welcoming me on board. Thank you to Fiona McLardie-Hore, the RUBY project manager for her organisation, enthusiasm, and collegiality, especially during the 24 RUBY peer training sessions. The RUBY peer volunteers were crucial to the success of the study and I would like to acknowledge their generous contribution. I would also like to thank them for engaging in data collection for this thesis.

Thank you to my friend Professor Adrian Walsh for reassuring me regarding my interpretation of the philosophical content. I am delighted to have added *galactagogues* to your vocabulary. I would like to acknowledge the important work of Dr. Heather Trickey in the breastfeeding peer support space; I didn't know Heather personally, but her contribution illuminated my own path and deepened my understanding of peer support's theoretical underpinnings. Also, thank you to Professor Art Stukas for kindly providing advice regarding the Volunteer Experience Survey.

To my family, thank you. David, for supporting me to create the space within our lives for my academic pursuits. Lucy and Emma, you have now left adolescence behind, and I want you to know how much your ongoing encouragement and interest in this project has kept me motivated.



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## Dissemination of study findings

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### PEER REVIEWED PUBLICATIONS

**Grimes, HA.,** McLachlan, HL., Forster, DA., McLardie-Hore, FE., Mortensen, K., & Shafiei, T. (2021). Implementing a successful proactive telephone breastfeeding peer support intervention: volunteer recruitment, training, and intervention delivery in the RUBY randomised controlled trial. *International Breastfeeding Journal*. 16:90. <https://doi.org/10.1186/s13006-021-00434-9>

**Grimes, HA.,** Forster, DA., Shafiei, T., Amir, LH., McLardie-Hore, FE., McLachlan, HL. (2020). Breastfeeding peer support by telephone in the RUBY randomised controlled trial: A qualitative exploration of volunteers' experiences. *PLoS One*. 15(8):e0237190. doi: <https://doi.org/10.1371/journal.pone.0237190>

**Grimes, HA.,** Shafiei, T., McLachlan, HL., & Forster, DA. (2020). Volunteers' experiences of providing telephone-based breast-feeding peer support in the RUBY randomised controlled trial. *Public Health Nutrition*, 1-11. <https://doi.org/doi:10.1017/S136898002000124X>

Forster, DA., McLardie-Hore, FE., McLachlan, HL., Davey, M-A., **Grimes, HA.,** Dennis, C-L., Mortensen, K., Moorhead, AM., Tawia, S., Gold, L., Shafiei, T., Small, R., East, CE., & Amir, LH. (2019). Proactive peer (mother-to-mother) breastfeeding support by telephone (Ringing up About Breastfeeding Early [RUBY]): a multicentre, unblinded, randomised controlled trial. *EClinical Medicine*, 8, 20-28. <https://doi.org/10.1016/j.eclinm.2019.02.003>

Forster, DA., McLachlan, HL., Davey, M-A., Amir, LH., Gold, L, Small, R., Mortensen, K, Moorhead AM., **Grimes, HA.,** & McLardie-Hore, FE. (2014). Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding (RUBY) trial protocol. *BMC Pregnancy and Childbirth*. 14: 177. <https://doi.org/10.1186/1471-2393-14-177>

## INTERNATIONAL PRESENTATIONS

**Maternal and Infant Nutrition and Nurture conference, Grange-Over-Sands, UK** (10 – 12 Oct 2019). Oral presentation: Volunteers' experiences of providing breastfeeding peer support in the 'Ringing Up about Breastfeeding' (RUBY) randomised controlled trial

**15th World Congress of Public Health, Melbourne, Australia** (3-7 April 2017). Oral presentation: *PASS IT ON: exploring the experiences of volunteers providing telephone support to breastfeeding mothers in a randomised controlled trial* (study overview)

**5th International Conference on Maternal, Infant and Child Nutrition and Nurture, Sydney, Australia** (5-7 November 2014). Oral presentation: *PASS IT ON: exploring the experiences of volunteers providing telephone support to breastfeeding mothers in a randomised controlled trial* (study design and early progress)

## NATIONAL PRESENTATIONS

**LCANZ Breastfeeding conference, Adelaide, Australia** (5- 6 Oct 2018). Oral presentation: *Volunteers' experiences of providing breastfeeding peer support in the 'Ringing Up about Breastfeeding' (RUBY) randomised controlled trial* (study outcomes and volunteer survey and focus group data)

**Australian College of Midwives 21st Conference. Perth, Australia** (16-18 Oct 2018). Oral presentation: *Volunteers' experiences of providing breastfeeding peer support in the 'Ringing Up about Breastfeeding' (RUBY) randomised controlled trial* (study outcomes and volunteer survey and focus group data)

**19th Biennial National Conference of Australian College of Midwives: 'Super midwives Making a Difference', Gold Coast, Australia** (Oct 2015). Oral presentation: *PASS IT ON: exploring the experiences of volunteers providing telephone support to breastfeeding mothers in a randomised controlled trial* (study progress with focus on volunteer coordination)



# Chapter 1 Introduction

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Globally, extending the duration of breastfeeding is an important public health goal, with the World Health Organization setting a target of increasing the rate of exclusive breastfeeding in the first six months up to at least 50% by 2025 (World Health Organization, 2014). Breastfeeding is the normal way to feed an infant, but it is no longer 'the norm' for many women. Consequently, women may need additional support to establish and maintain breastfeeding during the first six months of their infant's life (McFadden et al., 2017). Re-establishing the conditions necessary to make breastfeeding a mothering imperative requires a 'bottom' up approach to health promotion that focuses on its salutogenetic value, rather than a top-down approach that focuses on empirical outcomes. Evidence supports peer support interventions as a way of achieving this (Dennis, Hodnett, Gallop, & Chalmers, 2002; Forster et al., 2019; McFadden et al., 2017). The method of exploration used in this study attributes an inherent value to a woman's experiential and embodied knowledge of breastfeeding. At a conscious level, women may recognise the value of this knowledge, and seek opportunities to 'pass it on'.

## OVERVIEW OF THE RINGING UP ABOUT BREASTFEEDING EARLY (RUBY) RANDOMISED CONTROLLED TRIAL

Data used in this thesis were collected during the Ringing Up about Breastfeeding Early (RUBY) RCT. RUBY was a multicentre, two-arm un-blinded RCT conducted in three public maternity hospitals in metropolitan Melbourne, Victoria, Australia. The trial aimed to test whether proactive peer support, provided in the postnatal period by telephone, increased the proportion of infants who were breastfed for at least six months. First-time mothers intending to breastfeed were recruited after birth and prior to hospital discharge between 14<sup>th</sup> February 2013 and 15<sup>th</sup> December 2015. Women were eligible for inclusion if they were first-time mothers, admitted as public patients to the postnatal units of the participating hospitals, were proficient in English and were intending to breastfeed. They were randomly assigned to usual care or usual care plus proactive

telephone-based breastfeeding support from a trained peer volunteer for up to six months postpartum.

The primary outcome of the RUBY RCT was the proportion of infants receiving any breast milk at six months of age. In relation to this outcome, findings were that significantly more infants of women assigned to proactive telephone peer support were receiving any breast milk at six months of age compared to women assigned to usual care.

The studies presented in this thesis were undertaken within the bounds of the RUBY RCT and focused on the experiences of the volunteers who undertook the peer support role. The role of the volunteers in delivering the intervention in the RUBY RCT was crucial to its implementation. A detailed exploration of the delivery of the intervention, from the perspective of peer volunteers is the focus of this thesis.

## SIGNIFICANCE OF THE STUDY

This study provides important insights into the delivery of a peer support intervention that increases the duration of breastfeeding. The peer support relationship comprises the peer and recipient, interacting within a specific context. By examining the experience of volunteer peer supporters in the context of the RUBY trial, the study highlights salient points to consider in recruitment, support, and training of peers. The findings contribute to a pragmatic body of knowledge that helps those designing peer support programs to develop a sustainable intervention that is acceptable to both provider and recipients of the support.

## RESEARCH QUESTIONS

The overarching aim of this thesis was to explore and understand key aspects in the implementation of the peer support intervention used in the RUBY randomised controlled trial (RCT), to inform future upscaling and sustainability of proactive telephone breastfeeding peer support models.

### **The research questions addressed in this thesis were:**

- What factors contributed to successful implementation of the RUBY intervention?
- What are the characteristics of the RUBY volunteers and can an understanding of these characteristics inform future peer support programs?
- What were the motivations and experiences of volunteers providing the intervention?

## **OVERVIEW OF THE THESIS**

The overall structure of this thesis takes the form of 10 chapters and is presented as a thesis with publications. Three ‘first author’ publications (Chapters 7, 8, and 9) and a co-authored paper (Chapter 3) are presented in the body of the thesis. The publications in the body of the thesis have been incorporated into chapters along with explanatory text. The format of the thesis is as follows:

### **Chapters 1 to 6**

The overall aim of Chapters 1 to 6 is to situate the thesis within the Australian breastfeeding context, discuss the methodological and theoretical underpinnings of this study, and to provide background relevant to the RUBY RCT.

**Chapter 1** Chapter 1 introduces the study and its significance. The chapter also introduces the aims of the thesis and includes the research questions.

**Chapter 2** This chapter provides the background to the study including an historical overview of factors contributing to the current breastfeeding landscape in Australia.

**Chapter 3** This chapter details the primary and secondary outcomes of the RUBY RCT. The chapter is supported by a publication detailing the primary outcomes of the RUBY RCT.

- Chapter 4** This chapter provides a review of the literature related to peer support including models of support, and the experiences and motivations of those who provide peer support. It includes a focused discussion on the evidence for peer support as an intervention to improve breastfeeding outcomes.
- Chapter 5** This chapter explores the theoretical underpinnings used in this study including:
- a broad overview of Clary's functional approach to volunteer motivation
  - the concept of experiential knowledge and its application to peer support
  - asset and strengths-based approaches to breastfeeding support with a focus on salutogenesis
  - the concept of social support
- Chapter 6** This chapter provides the methodological framework for the thesis. This will include the pragmatic philosophical approach and mixed methods study design.

## **Chapters 7, 8 and 9**

Chapters 7 to 9 address the aims of this thesis in the form of three publications. Each chapter contains contextual and methodological information that links each chapter and integrates it into the body of the thesis.

- Chapter 7** Describes recruitment, training and supervision of volunteers, and details content of the calls including topics discussed, durations of calls and frequency of contacts.
- Chapter 8** Explores the experiences of the women providing telephone-based breastfeeding peer support to new mothers within the RUBY RCT.
- Chapter 9** Provides a qualitative exploration of volunteers' experiences of providing breastfeeding peer support by telephone in the RUBY randomised controlled trial.



## Chapter 10

This chapter provides a discussion and summary of the research findings regarding implementation of the RUBY peer support intervention and describes the experiences and motivations of peer volunteers. Potential directions for future research are also provided.

### CANDIDATE'S VIEWPOINT

An account (Box 1) of my experiences of breastfeeding and broader experiences as the RUBY volunteer coordinator are provided to explicate where I am positioned in relation to the research questions posed in this study.

*Box 1: Personal and professional experiences of breastfeeding – a reflexive account*

*I am a registered midwife, having undertaken hospital-based training in 1990. The first twenty years of my thirty-year midwifery career was spent providing in-hospital maternity care. Prior to the births of my two daughters, my knowledge of breastfeeding, and the support I gave to breastfeeding women was mainly derived from contemporary textbooks and observation of my peers.*

*I had little exposure to breastfeeding before becoming a midwife. I was not breastfed by my mother and the infant feeding choices of other women in my immediate family were mixed. My mother's attitude to breastfeeding was ambivalent. She didn't breastfeed and when she had her first child in 1954, she was told something along the lines of 'you'd be better off bottle feeding'.*

*My two children were born in 1996 and 2000, in regional Australia. I was a practising midwife, so when my first child was born, I knew I would breastfeed but don't recall 'planning' to do so at a conscious level. My first child attached easily, and I continued breastfeeding until she was around 12 months of age. My second child was born via caesarean section, and at 37 weeks gestation,*

*behaved as a late preterm babe in terms of her breastfeeding. She didn't latch strongly and lost an excessive amount of weight. I expressed breast milk to quantify the volumes she was receiving. The first four weeks were exhausting but I really wanted to keep breastfeeding. After discharge from hospital, I didn't turn to my midwifery colleagues for help. My baby was 'well' and I suspected that the only solution on offer would be to supplement her feeds with formula. I contacted a 'friend of a friend' in the ABA. Jenny was a warm and encouraging woman who on reflection, didn't 'do' anything to magically 'fix' the problem. There wasn't really a problem to fix – I simply had to support my daughter until she developed a strong and effective suck. What Jenny did provide was warmth, reassurance, and humour. She lightened the load by her attitude and shared small 'wins' with me. I would say at this point, a breastfeeding advocate was born! By the time she was four weeks of age, my daughter was an efficient breast feeder and we weaned when she was around 15 months of age.*

*When I was offered the opportunity to undertake PhD studies on a randomised controlled trial testing a proactive telephone peer support intervention to increase the duration of breastfeeding, it seemed like a very good fit. At each training session we asked the volunteers why they were interested in being a peer supporter. Each volunteer shared their own story. Recurrent themes were 'to pass on their personal breastfeeding knowledge' and to 'provide support' to those women who may not have a breastfeeding mentor in their lives. 'Pass it on' became the informal title for my study. The following four quotes are from volunteers in response to the question on their enrolment form 'Can you please describe why you are interested in being a volunteer for the RUBY project?'*

- *'You learn so much it is a shame not to pass it on!'*
- *'To help provide support and to pass on my experience to help new breastfeeding mothers'*

- *'I want to help new mums with support during a trying and confusing time of life. To practically pass on my knowledge.'*
- *'I am interested in becoming a RUBY volunteer because I really struggled breastfeeding my second child, there were many times I wanted to stop. A friend helped me get through the tough times. So, I would like to be able to pass that on to other mothers.'*

*The discussions at the informal 'get-togethers' we ran for volunteers were incredibly 'rich', and we were excited by how much volunteers shared about their experiences as peer volunteers. Although my study was originally conceived as a quantitative study, my supervisors and I agreed that it was important to capture the essence of these discussions, as they added further insights about the volunteers' experiences.*

*The embodied experience of breastfeeding makes a crucial contribution to the discourse of motherhood and as such, has inherent value. However, it can be a risky topic of conversation especially when it contravenes community norms. Peer support programs help motivated women to share their knowledge and support a breastfeeding mother within a safe relationship.*

*My personal experience of breastfeeding was that when support was needed, it did not arise organically from my social group, nor did I consider professional support appropriate. What I wanted was to talk to another mother who had experienced similar problems. Grass-roots organisations such as the ABA, and their volunteers, fulfill a crucial role in breastfeeding maintenance at a community level, and for individuals like me.*

## Chapter 2 Historical context and contemporary support for breastfeeding in Australia

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Breastfeeding is the normal way to feed an infant, but it is no longer necessarily 'the norm' for many women. Social and cultural shifts have seen breastfeeding move from being an inherent part of infant nurturing to an option, or in some settings, a positively deviant behaviour (Gross, Davis, Anderson, Hall, & Hilyard, 2017; Tawia, Bailey, McGuire, & James, 2019). Whilst lactation is a biological imperative for mammals (Palmer, 2009), the norms around feeding infant humans have been socially constructed. Historical perspectives of motherhood have illustrated how breastfeeding was influenced by social constructs such as wealth, privilege, and deprivation (Palmer, 2009). Anthropological studies show that feeding practices such as when the mother first suckles the infant and taboos around giving colostrum varied between cultures (Wickes, 1953). The duration of breastfeeding is also largely determined by cultural pressures (Baumslag & Michels, 1995).

Historical accounts have consistently reported that the duration of breastfeeding has declined and been replaced by alternative methods of infant feeding (Baumslag & Michels, 1995; Fomon, 2001; Forsyth, 1911). The progressive decline in 'the period of suckling' from two to three years in the fifteenth century to seven to nine months at the beginning of the twentieth century was noted by English doctor, David Forsyth in his 'History of Infant Feeding from Elizabethan times' (Forsyth, 1911, p. 139). This consistent, one directional decline in breastfeeding led Forsyth to make the following alarming conclusion in his article published in 1911:

*Does this shortening represent a physiological variation in our race which, still in progress, has yet to reach its goal? ... On the whole the future of infant feeding would seem to lie with the artificial methods ... If we are satisfied that a mother is able to provide facilities for artificial feeding and at the same time to avoid its risks we cannot decline to consider a method which has much in its favour. My own experience is that medical men, except when working among the poor, whose ignorance is a fatal objection, are inclined to regard the feeding-bottle*

*with less disfavour than they used to feel when its risks were greater. (Forsyth, 1911, p. 139)*

Conclusions such as this raise the question, ‘how did we get here?’. How did a routine fact of life for us as a species (Baumslag & Michels, 1995), come to be replaced by alternative methods of infant feeding? To contextualise contemporary trends in breastfeeding, it is necessary to provide a brief historical background of social issues that have impacted infant feeding trends. These include the replacement of breast milk feeding, either from the biological mother or employed wet-nurse with alternative foods, the ‘medicalization of infant feeding’ coupled with the ‘scientification of motherhood’, and movement of birth into hospitals and the growth in women’s employment. An in-depth exploration of these factors is beyond the scope of this thesis and a broad historical account will be offered rather than a more nuanced analysis of contested interpretations. Implicit in this account is the assertion made by Apple:

*Not all women everywhere and at all times slavishly followed the dictates of scientific and medical experts in raising their children. They could and did temper their faith in scientific expertise with greater or lesser doses of common sense and self-confidence in their own abilities. (Apple, 1995, p. 174)*

## HISTORICAL CONTEXT OF INFANT FEEDING

*The history of infant feeding in the 20th century is a story of the loss of a breastfeeding culture and the disintegration of traditional knowledge about how breastfeeding mothers and infants behave, the kind of strengths they possess and the type of support they require. (Mulford, 1995 in Dennis, 1999, p. 195)*

There is little mention of infant feeding practices in early texts beyond advice on employing a suitable wet -nurse or musings on which animal milk may be a suitable replacement if breast milk was not available (Forsyth, 1911; Wickes, 1952). More quotidian advice about infant feeding was likely sought from experienced local mothers and midwives (Wickes, 1952). Throughout history, affluent women who had the means

to employ a wet-nurse to suckle their infants, viewed breastfeeding their infant as a choice (Fildes, 1986). Social norms of the period also encouraged wealthy women to delegate physical labour to others and for many, this extended to avoidance of breastfeeding (Baumslag & Michels, 1995). Evidence also suggests that establishing breastfeeding was not without problems for some women, and early records describe methods for increasing milk supply and accounts of employing slaves as 'wet-nurses' (Wickes, 1952). That these records exist, suggests that knowledge of galactagogues was authoritative and considered significant enough for documenting.

Toward the end of the eighteenth century there was increasing interest in infant feeding, and a more assertive critique of breastfeeding and mothering began to emerge (Baumslag & Michels, 1995; Fildes, 1986; Forsyth, 1911; Palmer, 2009; Wickes, 1953). Infant mortality was exceedingly high and inextricably linked with infant feeding (Forsyth, 1911). Although this was largely due to the unhygienic living conditions and feeding contaminated foods, either in conjunction with breast milk or replacing it completely (Palmer, 2009), critical attention turned to motherhood and the inadequacy of mothers. With new scientific knowledge flourishing, traditional acceptance of teachings handed down through generations was viewed with contempt (Forsyth, 1911). Influential English doctor, William Cadogan notes:

*It is with great pleasure I see at last the preservation of children become the care of men of sense...In my opinion this business had been too fatally left to the management of women, who cannot be supported to have a proper knowledge to fit them for the task. (Dr William Cadogan, An Essay upon Nursing and the Management of Children from their Birth to Three Years of Age, 1748 in Palmer, 2009, p. 23)*

Cadogan advocated for breastfeeding but effectively undermined it by introducing restricted feeding regimes to prevent diarrhoea which was mistakenly attributed to overfeeding (Palmer, 2009). During this period, feeding animal milks became more common and analysis of various animal milks concluded cow's milk was the most suitable replacement for breast milk (Forsyth, 1911). Prior to the 19<sup>th</sup> century, feeding infants anything other than breast milk was associated with high infant mortality

(Baumslag & Michels, 1995). Alternatives to maternal breastfeeding included wet-nurse breastfeeding; feeding with animal milk; and feeding with 'pap', which was a mixture of bread soaked in water or milk (Forsyth, 1911). Infant mortality was extremely high and living conditions extremely unhygienic (Palmer, 2009). The situation didn't improve until scientific discoveries such as Pasteur's 'germ theory' led to improved sanitation and provision of safer milk alternatives in the 19<sup>th</sup> century (Thearle, 1985).

The infant mortality rate began to be recorded in England in 1875 and stimulated further medical interest in child well-being (Featherstone, 2008). Commercial dried milk became available in Europe in the 1850s and interest in creating the ideal milk to address infant mortality flourished amongst chemists (Apple, 1987). Thus, by the late nineteenth century a relationship had been established between medical professionals and manufacturers of commercial breast milk substitutes (Baumslag & Michels, 1995). Paediatrics emerged as a sub-specialty of medicine and paediatricians positioned themselves as influential advisors on issues of infant health (Featherstone, 2008).

At this time, no formal roles had emerged to support breastfeeding mothers beyond the postnatal support provided by midwives (Eden, 2017). Breastfeeding was learned through exposure to and observation of wet-nurses, female family members and peer support. Breastfeeding was the social 'norm' in the early twentieth century in England and most infants were breastfed until approximately 12 months of age (Fomon, 2001). With the commercialisation and increased safety of breast milk alternatives, wet nursing became less common in the twentieth century. There was a growing acceptance of 'scientific motherhood' which insisted 'women require expert scientific and medical advice to raise their children healthfully' (Apple, 1995, p. 161). Science and medicine were deemed a higher authority in infant feeding matters, and both served to undermine confidence in the adequacy of breastfeeding. Motherhood was portrayed in popular media as a learned skill (Apple, 1995). Apple (1995) notes the convergence of a number of social factors that led to mothers' growing trust in medical and scientific expertise. Culturally, prestige was afforded to a rational, empirical scientific approach, and by association, the products it marketed (Apple, 1995; Featherstone, 2008). Infant welfare clinics promoted the value of breastfeeding and also emphasised cleanliness and

the safe use of formula (Minchin, 2018). From the 1920s, formula came to be considered a safe alternative to breastfeeding and by 1950 was a cultural 'norm' in the USA (Minchin, 2018). This period also saw the rise in the infant welfare movement which arose from concerns about high infant mortality rates (Minchin, 2018).

### **Breastfeeding in Australia during the nineteenth and twentieth century**

During the nineteenth century in the fledgling Australian colony, doctors echoed their English colleagues' concerns about overfeeding and the use of substitute foods (Thearle, 1985). Breastfeeding was probably universal in Aboriginal communities at the time of colonisation with supplementation from another lactating woman if the need arose (Lund-Adams & Heywood, 1995). Amongst the new colonists, breast milk from either the biological mother or wet-nurse was considered the ideal food (Thearle, 1985). 'Pap' and animal milks were given via feeding vessels (Thearle, 1985). Female convicts who resided in 'Female Factories' weaned their infants at 9 -12 months (Thearle, 1985). The Australian infant mortality rate was significantly lower than that of England during the period from 1880 to 1910 due to protective factors such as less overcrowding and increased exposure to sunshine (Featherstone, 2008).

Most Australian mothers continued to initiate breastfeeding until around the 1930s (Smith, 2007), and weaned their infants at around nine months of age. Statistics regarding breastfeeding rates in the state of Victoria have been collected by the Infant Welfare system since 1944 (Lund-Adams & Heywood, 1995). There is criticism of this data that it is likely to reflect breastfeeding amongst more motivated women who engaged with the Infant Welfare service. However, it does shed light on breastfeeding trends and hints that current socioeconomic disparities in breastfeeding rates have historical roots. Statistics collected in the 1940's suggest around 42% of babies were fully breastfed until six months of age (Smith, 2007). Breastfeeding rates declined during the 1940s with this decline gaining momentum during the 1950s (Smith, 2007). Marketing of artificial milks, ironically mostly through the health system, coupled with restrictive breastfeeding practices in hospital maternity units continued to impact the prevalence of breastfeeding from the mid-twentieth century (Thorley, 2008). Despite comprising



25% of the workforce during the war years between 1939-1945, by the 1950s most mothers were not working outside the home, having given up work following the birth of their first child (Strachan, 2010). They were subjected to targeted campaigns from formula companies intent on selling the ideal that mothering was a scientific endeavour and 'formula' by its very association with science, was the optimal method of infant feeding (Strachan, 2010). This contributed to the disruption of traditional mother-to-mother support and reliance on generations of mothering wisdom.

By the early 1960s, further evidence of socioeconomic influence on breastfeeding began to emerge. A survey in Victoria reported breastfeeding rates at three months of age were lowest in low-income areas, while more babies of women who birthed in private hospitals and whose husband's employment was identified as 'professional' were receiving breast milk at three months of age (Lund-Adams & Heywood, 1995). Breastfeeding rates continued to decline throughout the 1960s. In Victoria, breastfeeding reached its nadir in the early 1970s when only 21% of women were fully breastfeeding their infants at three months (Lund-Adams & Heywood, 1995; Smith, 1999) and by the mid-1970s, a survey of feeding practices in Sydney reported that approximately 79% of mothers commenced breastfeeding, and 25% were still breastfeeding by the time the child was three months (Allen & Heywood, 1979). The first National Breastfeeding Survey was conducted by Australian government in 1983. At this time 85% of mothers were breastfeeding their infants on discharge from hospital, and this dropped to approximately 54% when infants were three months of age, with the most rapid decline occurring in the first six weeks (Lund-Adams & Heywood, 1995).

Community concern about falling breastfeeding rates led to the emergence of groups of women banding together to offer community-based support to breastfeeding mothers (Minchin, 2018). The La Leche League (LLL) was founded in the USA in 1956 followed shortly after by the Nursing Mothers' Association of Australia (NMAA) in 1964 (Minchin, 2018) (for more information regarding NMAA – now Australian Breastfeeding Association (ABA) – see page 25). These organisations advocated models of 'mother-to-mother' support for breastfeeding women. Simultaneously, women's groups started calling for change to maternity hospital practices and the criticism of medicalised

childbirth became stronger (Thompson, Kildea, Barclay, & Kruske, 2011). A review of the literature between 1970 and 2010 identified key events which contributed to the decrease in Australian breastfeeding rates and the increase in women experiencing breastfeeding complications (Thompson et al., 2011). The authors highlighted the complexity introduced to breastfeeding by midwives using complicated language and teaching techniques when helping women to achieve the perfect 'latch'. Holding space for women to instinctively initiate breastfeeding and respecting their innate capacity to nurture their infants required a paradigm shift away from entrenched ritualised postnatal practices.

Overall breastfeeding rates in Australia remained static between 1995 and 2005. Amir et al., (2008) analysed data from three national health surveys conducted by the Australian Bureau of Statistics between 1995 and 2005. In 2004/05, breastfeeding initiation was 88%, and overall, 50% were breastfeeding at six months of age compared with 86% and 47% in 1995 (Amir & Donath, 2008). In 2010, the Australian National Infant Feeding Survey (ANIF) (Australian Institute of Health and Welfare, 2011) was undertaken in response to recommendations from the Australian National Breastfeeding Strategy 2010-2015 (Australian Health Ministers' Conference, 2009). Overall, 52,008 mothers whose infants were <24 months old were randomly selected to receive a postal survey. The survey achieved a response rate of 56%, with usable data obtained from 28,759 surveys. Survey results indicate breastfeeding was initiated for 96% of infants, with 69% and 60% of infants at 4 and 6 months of age respectively, still receiving any breast milk (Australian Institute of Health and Welfare, 2011).

Analysis of data according to household income and socioeconomic status highlighted concerning trends (Australian Institute of Health and Welfare, 2011). Overall, the proportion of infants 'ever' breastfed was 98% in the highest income group (household income > \$AUD156,000) compared with 93% in the lowest income group (household annual income ≤ \$AUD25,999). The Socio-Economic Indexes for Areas<sup>1</sup> (SEIFA) categories show a similar trend, with 94% of women in the lowest SEIFA category 'ever'

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<sup>1</sup> Socio-Economic Indexes for Areas (SEIFAs) are categories that summarise the socioeconomic conditions of an area. They were derived by the Australian Bureau of Statistics (ABS) from the 2006 population Census

breastfeeding compared with 98% in the highest category. The disparity widens between three and six months of age with a higher proportion of infants from household with the highest incomes receiving breast milk at each timepoint, compared infants in households in the lowest income group (79% and 74% respectively, compared with 58% and 50%) (Australian Institute of Health and Welfare, 2011).

Women from low socioeconomic backgrounds are not the only sub-group in which breastfeeding rates are lower than the general Australian population. Aboriginal and Torres Strait Islander and women from culturally and linguistically diverse backgrounds, mothers of preterm infants, young mothers, those who smoke, obese mothers and those who have birth via caesarean section are identified in the current Australian National Breastfeeding Strategy as priority populations in terms of access to additional and specialised support (COAG Health Council, 2019). There have been calls for Australian policymakers to focus attention on sub-groups with lower rates of breastfeeding, with suggestions peer support interventions may be effective (Amir & Donath, 2008). However, a significant barrier for policymakers in terms of identifying sub-groups vulnerable to the risks of not breastfeeding, and evaluation of intervention effectiveness is the lack of a recent comprehensive dataset reporting breastfeeding outcomes. The breastfeeding rates cited in the Australian National Breastfeeding Strategy: 2019 and Beyond (COAG Health Council, 2019), are largely derived from data that is now over a decade old (Australian Institute of Health and Welfare, 2011). It is reassuring that the current Strategy, identifies the lack of a comprehensive and sustainable dataset to report breastfeeding outcomes as a priority area.

## **WHAT FACTORS SUPPORT WOMEN TO BREASTFEED UNTIL THEIR BABY IS SIX MONTHS OF AGE?**

There are risks associated with not breastfeeding for both mother and infant, and there is a relationship between the 'dose' of breastfeeding and amelioration of risk (Victora et al., 2016). Breastfeeding duration tends to be shorter in high-income countries such as Australia, compared to low- and middle-income countries (Victora et al., 2016). A commissioned report in Victoria, Australia concluded that increasing breastfeeding

duration in communities with high initiation is challenging, and that there is little evidence to guide the development of interventions (Department of Education and Early Childhood Development, 2014a). It is acknowledged that approximately 4% of women choose to exclusively express breastmilk for their infants (Johns, Forster, Amir, & McLachlan, 2013), however in this thesis no differentiation will be made between breastmilk feeding and breastfeeding.

Support for breastfeeding is complex and multi-faceted (Hauck et al., 2016), and it may be the cumulative effect of several factors that contributes to success (Tiedje et al., 2002). The *ecological model* originally proposed by Bronfenbrenner and applied to the breastfeeding context by Tiedje et al., posits that breastfeeding outcomes are not exclusively the result of individual preferences (Bronfenbrenner, 1986 in Tiedje et al., 2002) and promotion of breastfeeding must consider broader social and cultural contexts (Rollins et al., 2016). Central to social ecological models is the proposition that human behaviour is influenced by factors operating at different levels including intrapersonal, interpersonal, organisational, community, physical environment, and policy (Sallis, Owen, & Fisher, 2008). Far reaching factors such as intergenerational breastfeeding amongst family members can influence decisions, with evidence suggesting an association between having been breastfed and subsequent breastfeeding intention, initiation, and duration (Di Manno, Macdonald, & Knight, 2015). Interventions aiming to effect behavioural change are targeted at leverage points that may operate at single or multiple levels (Golden & Earp, 2012).

## **Breastfeeding intention**

Mothers make active decisions regarding infant feeding, with breastfeeding intention being the strongest predictor of breastfeeding behaviour (Donath, Amir, & The ALSPAC Study Team, 2003; Forster, McLachlan, & Lumley, 2006; Thulier & Mercer, 2009). Evidence suggests that having a positive attitude toward breastfeeding, a high perception of control over infant feeding, and the perception of social approval were predictive of a strong intention to breastfeed (McMillan et al., 2009). Breastfeeding intention, perceived breastfeeding self-efficacy, and social support are modifiable

factors that positively influence breastfeeding maintenance to six months (Meedya, Fahy, & Kable, 2010). Interventions to increase breastfeeding initiation or duration, aim to modify these factors, either individually or collectively (Blyth et al., 2004; Meedya et al., 2010) [The concept of ‘social support’ will be discussed in more detail in **Chapter 5**].

Although breastfeeding intention is the strongest predictor of breastfeeding initiation (Guo, Wang, Liao, & Huang, 2016), many mothers do not meet the goals they have set for themselves regarding breastfeeding duration (Odom, Li, Scanlon, Perrine, & Grummer-Strawn, 2013). Infant feeding can be conceptualised along a continuum between formula feeding and exclusive breastfeeding, with varying proportions of mixed formula- and breastmilk-feeding occurring between each pole. Mothers may move along the breastfeeding continuum in response to specific challenges such as lack of sleep, unsettled infant behaviour and perception of inadequate milk supply. The impetus for change can be the result of physical (e.g., nipple pain), emotional (feeling overwhelmed), social (e.g., embarrassed to breastfeeding in public), cultural (formula feeding norm) or environmental (e.g., lack of support of breastfeeding in the workplace) factors (Hoddinott, Craig, Britten, et al., 2012). Mothers may view a change in feeding behaviour, such as introducing or increasing formula-feeding, as a solution to such challenges (Hoddinott, Craig, Britten, & McInnes, 2012). This view positions infant feeding as a potentially ‘fluid’ behaviour rather than a dichotomy between either breastfeeding or formula feeding.

### **Perception of inadequate lactation**

The Australian National Infant Feeding Survey (ANIFS) provides baseline data on a range of breastfeeding outcomes (Australian Institute of Health and Welfare, 2011). Findings indicate the most common reason Australian women (n = 28,759) stop breastfeeding in the first six months is the perception that they have ‘not enough breast milk for the child’ (56%). Other reasons include ‘child not attaching properly’ (25%), ‘baby unsettled’ (24%) and ‘breastfeeding too painful’ (18%).

Inadequate milk supply is the most common reason given for ceasing breastfeeding and/or supplementing with formula (Brown, Dodds, Legge, Bryanton, & Semenic, 2014; Hornsby, Gurka, Conaway, & Kellams, 2019; Meedya et al., 2010; Moss, Dobson, Tooth, & Mishra, 2020; Thulier & Mercer, 2009). It is, however, a vague description that doesn't differentiate between a primary inability to produce milk, diminished volume of a previously adequate supply or whether the infant is unable to extract available milk (Neifert, 2001). Primary lactation insufficiency due to breast hypoplasia is rare and thought to affect around 5% of lactating women (Thulier & Mercer, 2009). However, it is frequently the mother's perception of inadequate supply rather than physiological low supply that threatens breastfeeding maintenance (Amir, 2014). It is likely that some women will interpret normal infant behaviour (baby seemed hungry; baby unsettled; baby nursing too much) as a sign of inadequate milk supply.

A prospective cohort study of primiparous Australian women (n = 290) explored women's reasons for ceasing breastfeeding, and collected data when the infants were four, six and 12 months of age (Newby & Davies, 2016). The most frequently cited reason for stopping breastfeeding at <12 weeks and between 12 and 26 weeks was 'I did not have enough milk'. Other common reasons for breastfeeding cessation for this cohort were 'My baby had trouble sucking or latching on' (< 12 weeks 48%; 12-26 weeks 14%), and 'Breast milk alone did not satisfy my baby' (< 12 weeks 38%; 12-26 weeks 29%). 'My nipples were sore, cracked or bleeding' was mentioned by nearly a third of women at < 12 weeks (30%) but was not reported as significant at 12-26 weeks. In contrast, 'my baby lost interest' was a reason for cessation between 12-26 weeks but not before 12 weeks (Newby & Davies, 2016).

These findings were supported by Moss et al., (2020) in an analysis of survey data from 1879 Australian mothers, collected in the Australian Longitudinal Study on Women's Health. The study aimed to identify reasons mothers didn't exclusively breastfeed to six months postpartum. Overall, 34% of infants were breastfed exclusively to six months. The reasons given for breastfeeding for less than six months included insufficient milk supply and breastfeeding difficulties. Sub-categories of 'Insufficient milk' included 'baby

seemed hungry' (28%), 'not enough milk' (10%), baby unsettled' (9%), baby nursing too much' (4%), 'baby not gaining weight' (4%) and 'baby lost interest' (4%).

A study comparing mothers' subjective perception of her breast milk supply with the variable 'my infant was not gaining enough weight' did not find a consistent relationship between low milk supply and poor infant weight gain (Newby & Davies, 2016). At each data collection time point (infant age four, six and 12 months) the percentage of women reporting 'I did not have enough milk' was higher than those reporting 'my infant was not gaining enough weight' (by 13, 14 and 10% respectively) which suggests some infants were in fact receiving enough milk, despite maternal perceptions otherwise. These findings need to be interpreted with caution as mothers may begin supplementing with formula once they consider their supply insufficient, thus off-setting lagging infant weight gains (National Institute for Health and Care Excellence, 2014; Newby & Davies, 2016). The perception of inadequate milk volumes to meet the infant's needs may coincide with normal infant behaviours and as such, may be modifiable through maternal education and support (Meedya et al., 2010).

### **Helping women to continue breastfeeding**

A systematic review to identify the determinants of breastfeeding was undertaken by Rollins et al., (Rollins et al., 2016) and included in the Lancet's Breastfeeding Series. The review identified determinants which affect breastfeeding decisions and contribute to an enabling breastfeeding environment. The review identified multiple ecological levels at which determinants operate, including *individual* (e.g., mother/ baby attributes), *setting* (e.g., health service, family, and community factors) and *structural* levels (e.g., sociocultural and market factors) (Rollins et al., 2016). Community-based peer support interventions aim to provide mothers with positive breastfeeding support to overcome a lack of support or negative support in her social context.

Three updated Cochrane reviews examining support for breastfeeding women have been undertaken since the initial review in 2002 (Britton, McCormick, Renfrew, Wade, & King, 2007; McFadden et al., 2017; Renfrew, McCormick, Wade, Quinn, & Dowswell,

2012; Sikorski, Renfrew M, Pindoria, Wade, & Renfrew, 2002). The overall aim of the reviews has been to assess the effectiveness of various forms of breastfeeding support provided to new mothers, either one-to-one or in groups, by lay people or health professionals, proactively or reactively in hospital or community settings during the postnatal and or the antenatal periods, which have been evaluated in controlled studies. Studies were included if support was provided face-to-face or over the phone, either as a single contact or for a longer period. Sikorski's et al's (2002) review included 20 eligible randomised or quasi-randomised controlled trials from 10 countries involving 23,712 mother-infant pairs, whereas the evidence presented in the latest review by McFadden et al., (2017) included 73 studies, conducted in 29 countries, with a total number of 74,656 mother-infant pairs. Findings from the latest review confirmed previous findings that all forms of extra support 'showed a decrease in cessation of 'any breastfeeding', which includes partial and exclusive breastfeeding (average risk ratio (RR) for stopping any breastfeeding before six months 0.91, 95% confidence interval (CI) 0.88 to 0.95; moderate quality evidence, 51 studies)' (McFadden et al., 2017, p. 2)

An international study including Australian (n = 153), Swedish (n = 139) and Irish (n = 64) women who had breastfed within the past 12 months, and who maintained breastfeeding for at least six months, explored the women's perceptions of what assisted them to continue breastfeeding for at least six months (Hauck et al., 2016). During a telephone interview, participants were asked the open-ended question 'what has assisted you to continue breastfeeding for at least six months?' (Hauck et al., 2016, p. 3). Content analysis of the transcripts identified 10 categories that were used to determine the citation frequency and women's ranking of their importance. The 10 categories were maternal self-determination; maternal knowledge of health benefits; maternal awareness of psychological benefits; partner support; breastfeeding was going well; informal face-to-face support; informal online support; health professional support; work environment; and breastfeeding being considered a cultural norm. Of the 10 categories, two categories were ranked in the top five across the three countries: 'informal face-to-face support' and 'maternal determination'. For Australian women the category 'breastfeeding was going well' was ranked as being most important. The authors highlight the importance of providing positive encouragement to women



regarding their breastfeeding ability to foster positive self-appraisal and build self-efficacy (Hauck et al., 2016).

Breastfeeding self-efficacy is an important influence on maternal decisions regarding infant feeding (Brockway, Benzies, & Hayden, 2017; Dennis, 1999) and influences how mothers respond to day-to-day challenges. The concept of self-efficacy originated in Bandura's Social Learning theory (Bandura, 1977) which evolved into the Social Cognitive Theory (Bandura, 1999). It has been used extensively in research focused on breastfeeding duration (Dennis, 2003a; Hauck et al., 2016; Meedya et al., 2010). Self-efficacy refers to an individual's belief that they can muster the motivation and cognitive resources and take a course of action to deal with life's challenges. This belief determines how much effort individuals will make to overcome obstacles or endure negative experiences to reach their goals (Bandura, 1977). Self-efficacy is not a fixed trait and is thus an important modifiable target for health promotion strategies (Bandura, 1998).

Levels of self-efficacy influence breastfeeding behaviours, including the amount of energy and persistence women will expend to overcome challenges, her subjective perception of challenges, subsequent emotional reactions, and her overall commitment to achieve personal breastfeeding goals (Dennis, 2003a). Higher levels of self-efficacy are associated with a longer duration of breastfeeding (Brockway et al., 2017; Dennis & Faux, 1999) and higher levels of social support are significantly associated with increased breastfeeding self-efficacy (Maleki-Saghooni, Amel Barez, & Karimi, 2020; Otsuka, Dennis, Tatsuoka, & Jimba, 2008). Conversely, a lack of positive support within a woman's social circle can affect her breastfeeding intention, initiation, and duration (Rollins et al., 2016). The woman's partner, usually the father of the baby, has a significant influence on decisions around breastfeeding initiation and duration (Scott, Shaker, & Reid, 2004). Evidence suggests that women are more likely to breastfeed rather than bottle feed their infant if they perceive this to be their partner's preference (Meedya et al., 2010). Social support needed for breastfeeding may also be garnered from female friends and relatives including grandmothers (Grassley & Eschiti, 2008).

It is important to understand the reasons women discontinue breastfeeding before the six months recommended by WHO. However, this information is only one half of the story and questions of 'why do women cease breastfeeding' need to be balanced with salutary approaches that illuminate what enables women to continue breastfeeding. Although the act of breastfeeding involves a physiological process and might be thought to be instinctive, it is also a learned behaviour. Strategies that can support learning include providing women with accurate information, and support from their families, communities, and the healthcare system. Skilled support from trained health workers, lay and peer counsellors, and certified lactation consultants can help to build mothers' confidence, improve feeding technique, and prevent or resolve breastfeeding problems (World Health Organization/ UNICEF, 2003). Women who have a strong intention to breastfeeding and are confident in their ability to overcome challenges are more likely to breastfeed for longer, especially if they also have positive social support to do so. However as previously described, breastfeeding is influenced by factors at multiple ecological levels including available government and community support. Attention will now turn to how breastfeeding is promoted in Australia through government policy and community supports.

## GOVERNMENT SUPPORT OF BREASTFEEDING IN AUSTRALIA

Breastfeeding in Australia is influenced by international and national policies, and Codes and Frameworks with governance at Federal, State, and Local level. Community and professional organisations also promote and support breastfeeding (Atchan, Davis, & Foureur, 2017). Global strategies began influencing national policies in the early 1980s when Australia adopted the WHO Code of Marketing of Breast-Milk Substitutes (World Health Organization, 1981). This was followed by a joint statement published by WHO and the United Nations Children's Fund (UNICEF) in 1989. Titled, 'Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services', the statement listed Ten Steps to Successful Breastfeeding (World Health Organization, 1989). The Ten Steps were reiterated in the Innocenti Declaration in 1990 (United Nations Children's Fund, 1991) and became part of the Baby Friendly Hospital Initiative (BFHI), originally published in 1991, and the updated in 2009 (World Health Organization & UNICEF,

2009). The BFHI comprises the '10 steps to successful breastfeeding' and the WHO International Code of Marketing of Breast-milk Substitutes, which sets the standard expected of health facilities in relation to the promotion of breast milk substitutes. Globally, 27.5% of maternity care facilities are accredited as 'Baby Friendly' with the majority of those being in low-and middle-income countries (31%) (World Health Organization, 2017). Australia introduced the BFHI in 1993, however by 2016, less than one quarter of Australian maternity healthcare facilities were BFHI accredited (Phoebe, Fetherston, & Nilson, 2019).

At a national level, the Australian National Breastfeeding Strategy: 2019 and Beyond (revised from the previous 2010–2015 version), provides a framework guiding all levels of governments on priorities and actions to protect, promote, support and monitor breastfeeding throughout Australia (COAG Health Council, 2019). The objectives of the Strategy include to increase the proportion of babies who are exclusively breastfed to around six months of age; to enable access to evidence-based support; to provide culturally safe breastfeeding education; to provide clinical services to support women to make informed decisions on infant feeding; and to raise community awareness of the significance of breastfeeding in achieving optimal health for both mother and child throughout the life course (COAG Health Council, 2019).

Maternity services in the state of Victoria are supported by the state government to provide home-based models of postnatal care (Victorian Government Department of Health, 2012). Women are offered at least one home visit by a midwife, usually within 24-48 hours following discharge from hospital. Multiple visits are arranged depending on the individual needs of the woman (Victorian Government Department of Health, 2012). Findings from a survey conducted at a tertiary hospital in metropolitan Melbourne estimated the median number of home visits was two for primiparous women and one for multiparous women (Forster et al., 2016).

At the local government level in the state of Victoria, Australia, the Maternal and Child Health (MCH) Service provides universal primary care to families with children from birth to school age (Department of Education and Early Childhood Development, 2019). It is a

requirement under the Child Wellbeing and Safety Act 2005 (Office of the Child Safety Commissioner, 2005) that a birth notice is sent by health services to the appropriate local government authority within 48 hours of a child's birth. MCH Services are provided at over 650 MCH centres located in 79 local government areas across the state of Victoria. Care is provided by registered nurses with additional postgraduate qualifications in midwifery and MCH. Ten key consultations known as the 'key ages and stages' (KAS) consultations are offered for children between two weeks of age and three and a half years of age. This universal service includes an initial home visit (up to 60 minutes) and nine subsequent clinic appointments (30-60 minutes). Breastfeeding status is recorded on discharge and at 2 weeks, 3 months, 4 months, 6 months, and 8 months (Department of Education and Early Childhood Development, 2019). In addition, a 24-hour telephone service (MCH Line) staffed by MCH nurses is available. Staff respond to calls regarding children from birth to school age, providing guidance, information, support and counselling (Department of Education and Early Childhood Development, 2019).

The Victorian State Government commissioned a report to review interventions that support breastfeeding initiation and duration as part of the Victorian Breastfeeding Research Project (Amir et al., 2010). This report reviewed existing literature to identify evidence-based interventions that might be suitable for implementation and evaluation in the Victorian context to improve the initiation and maintenance of breastfeeding. The review reported that it is more difficult to increase breastfeeding duration than initiation, with many interventions making only a short-term difference to breastfeeding outcomes (Amir et al., 2010). The report concluded that while there was no evidence from Australian studies for interventions to increase breastfeeding duration, there was some evidence suggesting lay peer support and telephone support may be effective in this setting (Amir et al., 2010). The current Australian National Breastfeeding Strategy: 2019 and Beyond, recognises the value of community-based breastfeeding peer support in improving breastfeeding duration in countries with high initiation rates such as Australia.

## COMMUNITY SUPPORT OF BREASTFEEDING IN AUSTRALIA: THE AUSTRALIAN BREASTFEEDING ASSOCIATION

The Australian Breastfeeding Association (ABA), formerly known as the Nursing Mothers Association (NMA) is a national not-for-profit organisation providing community-based support for breastfeeding women and health professionals (Australian Breastfeeding Association, 2020a). The overarching vision of the ABA is to promote breastfeeding and to embed it as 'culturally normal' (Australian Breastfeeding Association, 2020b). Based on a mother-to-mother support model, the ABA provides Breastfeeding Education Classes, hospital and school visits and is staffed by volunteers. Since 2008, the Department of Health has funded the ABA to run the National Breastfeeding Helpline, a national toll-free 24-hour helpline staffed by almost 650 ABA volunteers. During 2018-2019, the Helpline received 71,571 calls for breastfeeding support (Australian Breastfeeding Association, 2019). A fundamental pillar of the ABA framework is breastfeeding peer support to 'provide mothers with practical mother-to-mother support and evidence-based information, enabling them to make informed decisions on their breastfeeding journey' (Australian Breastfeeding Association, 2020a, p. 6).

### SUMMARY

Historically, breastfeeding remained the predominant method of infant feeding until the medicalisation of infant feeding and the emergence of safer artificial milks in the 20<sup>th</sup> century. When breastfeeding women encountered challenges, support was most likely derived from traditional sources of knowledge such as female relatives and midwives. In the mid-twentieth century scientific discourse promoted the equivalence of breast milk and infant formula. Despite the dominance of artificial means of infant feeding, groups such as the ABA emerged to promote breastfeeding through the provision of mother-to-mother support.

A shift occurred in the latter half of the century and the Innocenti Declaration in 1990 heralded more explicit government support for breastfeeding. Currently in Australia, breastfeeding is supported at national, state, and local government levels with policy

extolling the benefits of breast milk and the risks of not breastfeeding for women and babies (COAG Health Council, 2019; Department of Education and Early Childhood Development, 2014b). Despite high initiation rates, the duration of breastfeeding in Australia continues to fall short of the six months of exclusive breastfeeding as recommended by WHO.

Breastfeeding continues to be influenced by social and cultural contexts, and the disparity between rates of breastfeeding maintenance between women of low socioeconomic status (SES) and high SES is growing. Women from lower SES groups are generally more likely to cease providing any breast milk earlier than women from high SES group. As reported in the Victorian Breastfeeding Research Project, barriers to breastfeeding maintenance include factors that may be modifiable through the provision of social support. Other potentially modifiable factors include a woman's level of breastfeeding self-efficacy, along with her breastfeeding intention (Dennis, 2003a; Meedya et al., 2010). There is some evidence from international studies that proactive telephone peer support provided by a volunteer who has breastfed increases the proportion of women breastfeeding at three months postpartum compared to usual care (Dennis et al., 2002). The RUBY trial (Chapters 1 and 3), aimed to determine whether proactive peer support, provided in the postnatal period by telephone, increased the proportion of infants who were breastfed for at least six months in the Australian context.

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### ***Forthcoming chapter***

The following chapter (**Chapter 3**) includes a publication, co-authored by the candidate, which details the primary outcomes of the RUBY RCT. It provides important background to the RUBY RCT and presents the primary and secondary outcomes. The chapter also details the rationale for the RUBY RCT, the study design, main findings, and discussion. More detail of the study design can be found in the published RUBY RCT protocol paper (**Appendix A**). This information is important to understanding the context in which this thesis was nested.

## Chapter 3 The Ringing Up about Breastfeeding early (RUBY) randomised controlled trial

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The RUBY trial (Forster et al., 2019) was a multicentre, two-arm, un-blinded RCT conducted in three public maternity hospitals in metropolitan Melbourne, Victoria, Australia. The trial aimed to determine whether proactive peer support, provided in the postnatal period by telephone, increased the proportion of infants who were breastfed for at least six months compared to 'usual' care. First-time mothers intending to breastfeed were recruited after birth and prior to hospital discharge between 14<sup>th</sup> February 2013 and 15<sup>th</sup> December 2015. Women were eligible for inclusion if they were first-time mothers, admitted as public patients to the postnatal units of the participating hospitals, were proficient in English and were intending to breastfeed. They were excluded if they had a serious physical or medical illness, had a multiple birth, were a member of the Australian Breastfeeding Association prior to the baby's birth or the infant remained in hospital after the mother's discharge. The RUBY trial protocol (Forster et al., 2014) was published and is included as **Appendix A**. This chapter includes a publication which details the primary outcomes of the RUBY RCT. The following sections provide an overview of the study, and further details will be provided in the publication.

The primary aim of the RUBY study was to determine whether peer support, provided in the postnatal period by telephone, increased the proportion of infants who were breastfed for at least six months. Secondary aims were to test if a telephone peer support intervention:

1. increased mean breastfeeding duration
2. increased exclusive breastfeeding at three and six months
3. increased any breastfeeding at three and 12 months, and to
4. evaluate the interventions from the participant and peer support volunteer perspectives, and to
5. evaluate the cost effectiveness of peer support

The trial was based on a Canadian trial (Dennis et al., 2002) which achieved a large effect on the proportion of women breastfeeding at three months; 81% compared with 67% in the control group, with no evidence of adverse effects. The impetus for the RUBY RCT were findings from a review undertaken in the Australian state of Victoria that failed to identify strong evidence for successful strategies to extend the duration of breastfeeding in Australia to meet world Health Organization targets (Amir et al., 2010). The review also identified a growing disparity between continuation of breastfeeding by mothers in higher and lower socioeconomic groups. The maternity services from which RUBY participants were recruited served a relatively high proportion of women from disadvantaged backgrounds (Forster et al., 2014).

## THE RUBY PEER SUPPORT INTERVENTION

Women were randomly allocated to receive either 'usual care' (n = 578) or the peer support intervention in addition to usual care (n = 574). 'Usual care' comprised a hospital stay of up to 48 hours following vaginal birth and 72 hours following caesarean section. Following discharge, women could access hospital-based breastfeeding services including lactation consultants. Peer support was provided by volunteer women recruited from the community. Volunteers were guided by the RUBY call schedule. The volunteer made the first contact within four to six days of birth and followed up with a second call within three to four days of the first. Calls were then weekly for 12 weeks, and then three- to four-weekly, until the baby was six months of age. Peer volunteers were advised that the actual call frequency could also be responsive to the mothers' needs.

## THE PEER VOLUNTEERS

Peer volunteers were recruited from the community and were women who had breastfed for at least six months and were not trained breastfeeding counsellors. Peers attended a mandatory four-hour training session (**Appendix B**) which focused on enhancing communication skills and providing peers with links to quality resources and referrals. The peer's experiential knowledge was considered sufficient and providing



additional breastfeeding knowledge was not a significant aspect of training. The peers signed a written consent form on commencement in which they agreed to maintain the recipient's privacy and confidentiality and to meet the requirements of the role outlined during the training session. The peers were community-based and did not interact directly with health professionals. Further details of recruitment, training and support of peers are presented in **Chapter 7**.

## SUMMARY OF MAIN FINDINGS OF THE RUBY RCT

The primary outcome of the RUBY RCT was the proportion of infants receiving any breast milk at six months of age. Infants of women allocated to telephone-based peer support were more likely than those allocated to usual care to be receiving breast milk at six months of age (intervention 75%, usual care 69%; Adj. RR 1.10; 95% CI 1.02, 1.18). There were no adverse events. A full discussion of the primary outcome is provided in the publication that follows.

## CO-AUTHOR STATEMENT

My involvement in the RUBY study began before recruitment of trial participants commenced. I fulfilled the role of peer volunteer coordinator throughout the trial. As such, I assisted with planning and delivering the training sessions to RUBY volunteers and supervised the volunteers throughout their participation in the trial. I also designed all data collection tools relevant to the volunteers' experience. I was involved in collecting data for aspects of the RUBY process evaluation related to volunteer recruitment and training, intervention delivery, preparing data for analysis and contributing to revisions of the following manuscript.

## Citation

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The candidate's contribution to this manuscript was approximately 20%. The paper is presented here to provide important context for this thesis.

Candidate:

Date: 27<sup>th</sup> October 2021

Principal supervisor:

Date: 27<sup>th</sup> October 2021



## Research Paper

## Proactive Peer (Mother-to-Mother) Breastfeeding Support by Telephone (Ringing up About Breastfeeding Early [RUBY]): A Multicentre, Unblinded, Randomised Controlled Trial

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## ABSTRACT

**Background:** Breastfeeding rates are suboptimal internationally, and many infants are not receiving any breast milk at all by six months of age. Few interventions increase breastfeeding duration, particularly where there is relatively high initiation. The effect of proactive peer (mother-to-mother) support has been found to increase breastfeeding in some contexts but not others, but if it is shown to be effective would be a potentially sustainable model in many settings. We aimed to determine whether proactive telephone-based peer support during the postnatal period increases the proportion of infants being breastfed at six months of age.

**Methods:** RUBY (Ringing Up about Breastfeeding earlyLY) was a multicentre, two-arm un-blinded randomised controlled trial conducted in three hospitals in Victoria, Australia. First-time mothers intending to breastfeed were recruited after birth and prior to hospital discharge, and randomly assigned (1:1) to usual care or usual care plus proactive telephone-based breastfeeding support from a trained peer volunteer for up to six months postpartum. A computerised random number program generated block sizes of four or six distributed randomly, with stratification by site. Research midwives were masked to block size, but masking of allocation was not possible. The primary outcome was the proportion of infants receiving any breast milk at six months of age. Analyses were by intention to treat; data were collected and analysed masked to group. The trial is registered with ACTRN, number 12612001024831.

**Findings:** Women were recruited between Feb 14, 2013 and Dec 15, 2015 and randomly assigned to peer support ( $n = 574$ ) or usual care ( $n = 578$ ). Five were not in the primary analysis [5 post-randomisation exclusions]. Infants of women allocated to telephone-based peer support were more likely than those allocated to usual care to be receiving breast milk at six months of age (intervention 75%, usual care 69%; Adj. RR 1.10; 95% CI 1.02, 1.18). There were no adverse events.

**Interpretation:** Providing first time mothers with telephone-based support from a peer with at least six months personal breastfeeding experience is an effective intervention for increasing breastfeeding maintenance in settings with high breastfeeding initiation.

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**Abbreviations:** ABA, Australian Breastfeeding Association; ACTRN, Australian New Zealand Clinical Trials Registry number; Adj. RR, Adjusted relative risk; AUD, Australian dollar(s); CI, Confidence interval; HR, Hazard ratio; RCT, Randomised controlled trial; RR, Relative risk; RUBY, Ringing Up about Breastfeeding earlyLY; sd, Standard deviation.

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## Research in context

### Evidence before this study

The evidence on how to maintain breastfeeding in countries such as Australia with intermediate to high breastfeeding initiation was limited before the RUBY started, and most strategies aimed at increasing the duration of breastfeeding were ineffective. Overall, pre-RUBY, peer support provided in the postnatal period seemed likely to reduce the risk of not breastfeeding, particularly if the support included at least five contacts; however the evidence suggested that in *high-income countries*, peer support might have limited effect. A more recently updated systematic review on support for breastfeeding found increased evidence of the value of face-to-face support from health professionals to increase breastfeeding, but no positive association between (predominantly) telephone-based peer support and increased breastfeeding maintenance <http://www.ncbi.nlm.nih.gov/pubmed/28244064>. To capture any further evidence since the conduct of these systematic reviews, we searched PubMed and CINAHL Plus on April 5, 2018 for trials reported in 2016 through 2018 that compared proactive telephone-based peer support to increase breastfeeding, using search terms (((breastfeeding or breast feeding or breast fed or breastfed [MeSH Terms])) AND (random\* or controlled[MeSH Terms])) AND (\*phone[Title/Abstract]) AND support[Title/Abstract] AND ("2016/01/01"[PDAT]: "2018/04/05"[PDAT]) (PubMed) and "TX (breastfeeding or "breast feeding" or breastfed or "breast fed") AND TX \*phone\* AND TX controlled AND support NOT TX HIV 2016-2018" (CINAHL Plus). We identified only two study protocols and two feasibility studies; that is, no further evidence to date.

### Added value of this study

This is the largest study to date (to our knowledge) exploring if proactive telephone-based peer support is associated with increased breastfeeding at six months, and the number of participants is more than the total previously included in this specific meta-analysis (i.e. of telephone-based peer support) in the relevant Cochrane review. We found a positive association with assignment to proactive telephone-based peer support and the proportion of infants receiving breast milk at six months.

### Implications of all the available evidence

Our large adequately powered RCT provides evidence that proactive volunteer lay support can improve the prevalence of breastfeeding to six months in primiparous women – an important finding given how difficult it is to increase breastfeeding maintenance, particularly in settings with high breastfeeding initiation. This intervention has great potential for widespread implementation at a population level. The research team included investigators from the leading consumer organisation for breastfeeding in Australia, the Australian Breastfeeding Association, and the intervention was deliberately co-designed so that it could be scaled up with very little additional infrastructure.

## 1. Introduction

Knowledge about the benefits of breastfeeding for both women and children has expanded in the last decade [1], and the global economic cost associated with the proportion of infants not being breastfed has been quantified [2]. Not breastfeeding is associated with poorer outcomes for infants [3] and women [4] in both low and high income

countries [1], yet breastfeeding duration is shorter in most high income countries compared with low income countries [1].

Australia has high breastfeeding initiation, with 96% of infants commencing breastfeeding; however by six months of age only 60% of infants are receiving any breast milk, and only 15% are exclusively breastfed to five months [5]. Infants in low income Australian families are less likely to initiate breastfeeding and more likely to have a shorter duration; 93% of infants in families in the lowest income quintile commence breastfeeding, and by four months only 52% are receiving any breast milk, compared with infants in families in the highest income quintile, whose rates are 98% and 77% respectively [5]. These findings suggest a further increase in health inequities among socially disadvantaged infants already at risk of poorer health outcomes [6], and that interventions need to be in place to prevent early breastfeeding cessation. In Victoria, the second most populous state in Australia, the most recent report (2014/2015 data) shows the overall rate of any breastfeeding at six months as 50% [7], with marked disparities across the state; of the 78 local government areas, some have overall rates of any breastfeeding at six months as low as 38%, while others are up to 64% [8]. Strategies to support breastfeeding maintenance in countries such as Australia need therefore to focus on the groups least likely to initiate and continue breastfeeding.

When this study was designed there was limited evidence on how to maintain breastfeeding in countries with intermediate to high breastfeeding initiation such as Australia [9]. A more recent 2017 Cochrane review (which included 73 studies from 29 countries) found breastfeeding support is likely to be more effective in settings with high initiation, that both lay and professional support are beneficial, and that face-to-face support is associated with better outcomes than telephone-only support [10]. The two sub-analyses of predominantly telephone-based support showed no evidence of effect, however of the 27 studies that explored telephone-based support, details of whether the support was lay or professional, or proactive or not was not clear in all cases. There was also no sub-analysis of proactive support (initiated by someone other than the woman herself) versus reactive support (provided in response to a request or question from the woman) [10]. The effect of peer or lay support versus professional support was difficult to interpret due to the different timing of outcome measurements and whether it was *exclusive* or *any* breastfeeding being assessed [10]. Another systematic review included only peer support interventions aimed at increasing breastfeeding continuation, and found peer support was a) more likely to be effective in low and middle income settings than high income countries; b) more effective if the number of planned peer-to-mother contacts were  $\geq 5$ ; and c) was more effective if initiated postnatally rather than antenatally and continued postnatally [11].

One of the randomised controlled trials (RCTs) included in both the reviews found a large effect: a Canadian study of proactive telephone-based support by trained peers with breastfeeding experience found a 14% difference in any breastfeeding at three months – 81% of those allocated to the peer support group were breastfeeding compared to 67% in the control group [12]. It was this study which underpinned the trial reported here, undertaken in the Australian context.

The objective of the Ringing Up about Breastfeeding (RUBY) trial was to determine whether peer (mother-to-mother) support, provided during the postnatal period by telephone, using a proactive approach, increased the proportion of infants who received breast milk for at least six months [13]. In this paper, we present the primary and secondary outcomes.

## 2. Methods

### 2.1. Study Design

We conducted a two-group, unblinded randomised controlled trial, recruiting women from three public hospitals in the state of Victoria,

Australia, all of which provide care for relatively disadvantaged women. Ethics approval was obtained from the following Human Research Ethics Committees (reference number in brackets): Royal Women's Hospital (12/25); La Trobe University (12-082); Monash Health (12251B); and Western Health (12/WH/107).

## 2.2. Participants

Women were eligible for inclusion if they were first time mothers, admitted as public patients to the postnatal units of the participating hospitals, were proficient in English and were intending to breastfeed. They were excluded if they had a serious physical or medical illness, had a multiple birth, were a member of the Australian Breastfeeding Association (ABA)<sup>1</sup> prior to the baby's birth (indicative of high motivation to breastfeed and high self-efficacy), or the infant remained in hospital after the mother's discharge. Further detail is provided in the published protocol [14].

Research staff aimed to offer trial participation to all eligible women during their inpatient stay at one of the trial sites, after the birth of their baby, and prior to discharge from hospital, which was approximately 48 h postpartum or less. Before randomisation took place, women who agreed to participate provided written consent and completed a baseline questionnaire which included questions about planned breastfeeding duration, family support for breastfeeding, infant feeding since birth, and demographic characteristics.

## 2.3. Randomisation and Masking

Women were randomly allocated (1:1) to either the usual care group or intervention group that consisted of usual care plus proactive telephone-based support from a peer volunteer. Randomisation was carried out by a computerised random number generator in variable block sizes of four to six (to avoid selection bias), and was stratified by site. The allocation sequence was generated and administered by the Clinical Epidemiology and Biostatistics Unit at Murdoch Children's Research Institute. The program was accessed by research staff who entered the details of the trial hospital and the woman's birth date, then a randomised allocation was immediately generated, and the woman was informed of the outcome. Recruitment staff were masked to block size. Staff on the postnatal wards were not aware of group allocation. Outcome data collection was masked to group allocation. The research team were masked to group allocation, and remained masked at all stages until the end of the primary data analysis. All data cleaning and variable generation took place before trial group data were added, then trial groups were relabelled by an independent researcher so that those conducting the analysis could not identify the groups during the analysis. Data were presented to the Data Monitoring Committee for an interim analysis in unlabelled study groups.

## 2.4. Procedures

### 2.4.1. Usual Care

In Australia breastfeeding support is a priority in the postnatal period both in hospital and in the community and all women in the study had access to the usual supports for breastfeeding. The standard postpartum hospital stay at all sites was up to 48 h after vaginal birth and 72 h after caesarean section, with each site providing access to hospital specialist breastfeeding services by lactation consultants if needed. Women were offered one to two postnatal visits in the home from a hospital midwife within the first week after discharge from hospital, after which a Maternal and Child Health Nurse (MCHN) service was

provided in the community.<sup>2</sup> All women could also access the ABA telephone helpline service, staffed by trained volunteer breastfeeding counsellors. This free service is available 24 h a day seven days per week, but is reliant upon the breastfeeding mother accessing the service herself; that is, reactive rather than proactive, and does not provide continuity between the counsellor and the mother.

### 2.4.2. Intervention

In addition to usual care, all women allocated to the intervention group received proactive telephone-based support from a peer volunteer. Participant details were provided to the peer volunteer coordinator, who allocated the next available peer to provide support to the mother. Peers were provided with the woman's first name and phone number, and were requested to initiate contact. Peers made an initial telephone call to the new mother 24 to 48 h after hospital discharge, i.e. four to six days after the birth, with a follow-up call three to four days after the initial call. Subsequent calls were to be made each week for the first twelve weeks after birth, then three to four weekly between twelve weeks and six months. The calls focused on the new mother's wellbeing and breastfeeding experience, with volunteers referring the mother to existing support services as required. The participant was able to contact the peer volunteer between the scheduled calls as needed.

Women were eligible to be peer volunteers if they had breastfed a baby until at least six months of age and were not breastfeeding experts (defined as no more than eight hours of breastfeeding training as a professional or counsellor). The majority of peers were recruited via online posts requesting expressions of interest on the ABA Facebook page. Recruitment of the peer volunteers occurred between December 2012 and May 2015. During this time, 24 training sessions were conducted, taking place every 4 to 8 weeks, and including 4 to 17 participants in each. The volunteer coordinator screened potential volunteers for eligibility, and volunteers were required to commit to being available to support at least one mother for six months. All attended a four-hour training session conducted by the RUBY research team in conjunction with an ABA educator. The sessions, adapted from the ABA training course for counsellors, focussed on active listening, respecting beliefs and values of others, positive language, empathy, building confidence, baby behaviour, and encouraging and supporting new mothers. Emotional wellbeing was a focus, along with breastfeeding and parenting issues, and peers were encouraged to refer women to existing services (such as ABA, MCHN, general practitioner) as required. The volunteer coordinator provided ongoing supervision of the peer volunteers, and kept in regular contact by phone and email; contact was made after the initial peer-participant matching, and was then monthly, with additional contact as needed.

### 2.4.3. Data collection

Demographic data (including maternal age, education, marital status, maternal country of birth, and smoking) were collected by questionnaire at recruitment and prior to randomisation, and obstetric and neonatal medical data were collected from the medical record at the time of recruitment. Women in the intervention group were also mailed questionnaires regarding their experience of receiving peer support after completing the six-month telephone interview conducted by the research assistant. Peer volunteers were asked to log details of all contacts with their allocated mother(s) (e.g. call length, discussion

<sup>1</sup> The Australian Breastfeeding Association is a non-profit, volunteer organisation, and the leading consumer breastfeeding advocacy group in Australia, providing resources, education and support to families.

<sup>2</sup> In Victoria, Australia the MCHN service is a universal free service with a health professional who is both a Registered Nurse and Registered Midwife and who holds a Postgraduate Diploma in Community Child Health. The MCHN service supports maternal health and wellbeing and children's health and development from birth until school age, as well as providing parenting support. Women are allocated one home-based visit in the first two weeks after discharge plus at least 4 clinic visits over the first 6 months, at no cost. Visits are scheduled as 30 min and explicitly include breastfeeding as a topic, and participation rates are 95% up to 8 weeks [15].



content), and were reimbursed \$50 AUD for each woman supported to cover costs of calls.

## 2.5. Outcomes

The primary outcome was the proportion of infants receiving any breast milk at six months of age. This outcome was collected six months post birth by a telephone interview conducted by trained research assistants masked to group assignment.

The questions used to describe infant feeding were “In the last 24 hours, how have you been feeding your baby?” and “We would also like to know all the different ways you have been feeding your baby since birth?” (both questions had a list of pre-coded mutually exclusive response options [14] the research assistants completed), in conjunction with a series of questions to explore when (and if) solids were commenced, when breast milk feeding had ceased (if it had), and when (and if) other fluids had been commenced. The research group developed and have reported on these outcome measures extensively in previous breastfeeding studies [16–20].

Secondary outcomes were the proportion of infants receiving breast milk only at six months (defined as breast milk being the only milk provided in the last 24 h, but not excluding solid foods; thus not to be misinterpreted as the proportion exclusively breastfeeding to six months as recommended by the World Health Organization [21]) and time to cessation of breastfeeding, measured by survival analysis, censored at six months postpartum (both outcomes by self-report at six-month interview). Other outcomes not included in this paper (due to the large amount of data this would include) are the cost of the peer support intervention, and cost effectiveness in relation to infant and maternal health outcomes and health service use (medical records and self-report); women's views and experiences (intervention group, self-report); and peer volunteers' views and experiences (online survey and focus groups). These will be reported in other papers. Intervention fidelity was measured using data from peer volunteer call logs (recording details of each contact, or attempted contact, with their allocated participant/s), and women's self-report.

There was no separate Safety Committee; the trial coordinator and volunteer coordinator monitored any potential adverse issues occurring in trial participants or volunteers respectively, and reported to chief investigator team.

## 2.6. Statistical Analysis

Our primary hypothesis was that proactive peer support provided to women by telephone in the postnatal period would increase the proportion of infants receiving any breast milk at six months by 10% compared with usual care (from 46% to 56%). Secondary hypotheses were that proactive peer support provided by telephone in the postnatal period would increase breastfeeding duration (i.e. decrease early cessation of breastfeeding) and increase exclusive breastfeeding at six months. We based our sample size calculations on the rate of any breast milk feeding in Victoria at the time the study was conceived, which was 46% [22]. Allowing for a 10% difference in either direction (i.e. up to 56% or down to 36%) with 80% power and alpha 0.05, we needed 822 women (411 per group). Allowing 20% loss to follow-up meant we needed to recruit 1028 women. We received advice that there was potential for within-peer clustering, so allowed for this in our sample size calculations [14]. We assumed an overall average breastfeeding rate of 56% in the intervention arm, and calculated our final sample size required as 1152 (576 per trial group) [14]. This sample size also ensured adequate power to detect clinically important differences in exclusive breastfeeding at six months and duration of breastfeeding.

Collection of data, including data on eligible non-participants, was undertaken in accordance with the requirements of the CONSORT guidelines for reporting of randomised trials [23]. All analyses were by intention to treat, undertaken in Stata Version 14. The primary outcome

was calculated as event numbers and percentages (by trial arm), and compared using relative risks (RR) with 95% confidence intervals (CIs), with usual care as the reference group. In order to account for the stratification variable (site), and for two additional factors which may have impacted on the outcomes based on the scientific literature, and which did differ between groups (i.e. breastfeeding intention and formula given [prior to recruitment]), multivariate analysis was performed. Predicted probabilities of the outcomes were estimated using marginal standardisation after logistic regression (using the margins command). The predicted probabilities were then used to derive the adjusted risk ratios (Adj. RR) using the nlcom command in Stata 14. The comparison of those receiving breast milk only at six months was calculated the same way. As detailed below in the results, a total of 230 peers supported a mean of two mothers, so although planned for, we did not consider it necessary to adjust for a cluster effect; however further analysis was conducted to confirm if taking potential clustering into effect made a difference to the estimated Adj. RRs. Volunteer mother ID codes were used to denote clusters. Control mothers were each allocated an individual ID in this variable so they were each considered as a single cluster, as recommended in a recent paper [24]. There was no change in point estimates; so the Adj. RRs do not include adjustment for cluster.

Survival analysis was used to explore time to cessation of any breast milk feeding, with the outcome censored at six months postpartum. The Cox proportional hazards model was used to estimate a hazard ratio (HR) for risk of cessation of any breast milk feeding, adjusted for breastfeeding intention and formula given (prior to recruitment), with the proportional hazards assumption checked and confirmed. All primary and secondary outcomes are presented as adjusted results.

Intervention fidelity variables are presented as numbers and percentages, with mean and standard deviation used where appropriate. Cost-effectiveness data and women's views of receiving and providing the intervention will be reported elsewhere. A Data Monitoring Committee oversaw the study. The trial is registered with the Australian New Zealand Clinical Trials Registry: ACTRN 12612001024831.

## 3. Results

Between Feb 14, 2013 and Dec 15 2015, we recruited and randomised 1157 women to the trial: 577 to telephone-based peer support and 580 to usual care (Fig. 1). Of the 13,637 women assessed for eligibility, the most common reason for ineligibility was multiparity (6672 [65%] of 10,212). Of those eligible and approached, 1157 [48%] of 2433 agreed to participate. Randomisation by site was as follows (number assigned to peer support/number assigned to usual care): Royal Women's Hospital,  $n = 382/382$ ; Monash Health,  $n = 113/114$ ; Sunshine Hospital,  $n = 82/84$ . Five women (three in the peer support group and two in usual care) were found to be ineligible after randomisation and subsequently excluded; one woman from each trial arm was found to have had a postpartum haemorrhage >1000 ml, one woman in usual care was an antenatal member of the ABA, and in the intervention arm one participant was multiparous and one participant's infant remained in the neonatal special care unit following maternal hospital discharge. Overall, 1152 women were available for the primary analysis (574 in the peer support group and 578 in the usual care group). At six months 501 women (87%) in the peer support group and 515 in the usual care group (89%) completed the telephone interview.

Baseline characteristics were similar between groups (Table 1). A higher proportion of infants of women assigned to usual care had received infant formula prior to recruitment (28% compared with 22%) and more women assigned to usual care planned to breastfeed for six months or more (81% compared with 76%).

A total of 230 peer volunteers (of 246 trained) provided support to new mothers. The volunteers were matched with mothers a mean of 3.2 days postpartum (sd 2.97 days), with 85% matched within four days of birth. The mean time to the first telephone contact was 7 days

after birth (sd 4.4 days), with 73% receiving a call within a week of giving birth. Participation in the program wasn't necessarily continuous, as volunteers were able to take breaks from supporting participants based on their own personal or family needs. The peer volunteer participation intensity is therefore more accurately measured by how many mothers each volunteer was allocated and supported. Peers supported a mean of 2 mothers (range 0 to 11). The number of participants supported at any one time by a peer depended on the peer's availability and the needs of her currently supported mothers. Each mother received six calls on average (defined here as spoken verbal contacts between mother and volunteer), and for the 64% whose support continued beyond four weeks, the median number of calls was higher with increasing duration of participation, with a median of 11 calls for those whose support continued for 20 weeks or more (Table 2). One-third of the volunteer/participant pairs ( $n = 196$ ) maintained contact for the planned 26 weeks, including two volunteer/participant pairs who communicated almost solely by text message, and 209 volunteer/mother pairs (36%) had contact for less than four weeks (including 61 pairs where no contact was made). Known reasons for discontinuing contact before six months (once established) included: [1] the volunteer no longer being able to contact the mother ( $n = 195/319$ , 61%); [2] the mother having ceased breastfeeding ( $n = 35/319$ , 11%); [3] the mother requesting to discontinue calls ( $n = 29/319$ , 9%); [4] the volunteer being unable to continue to provide support ( $n = 19/319$ , 6%); and [5] other varied reasons ( $n = 44$ ). Where contact was never established ( $n = 61$ ), the most common reason was the volunteer being unable to contact the mother ( $n = 38/61$ , 62%) due to telephone difficulties (change of number, phone no longer working) or no response. One woman requested not to receive support, and two indicated they were too busy to participate. In the other 20 instances, it is not known why support did not commence. Of the 2112 calls recorded on returned call logs, 294 calls were initiated by the participant (not the peer); however it is not known if this was women reactively seeking support in these instances, as the call may have been pre-planned by an exchange of text messages.

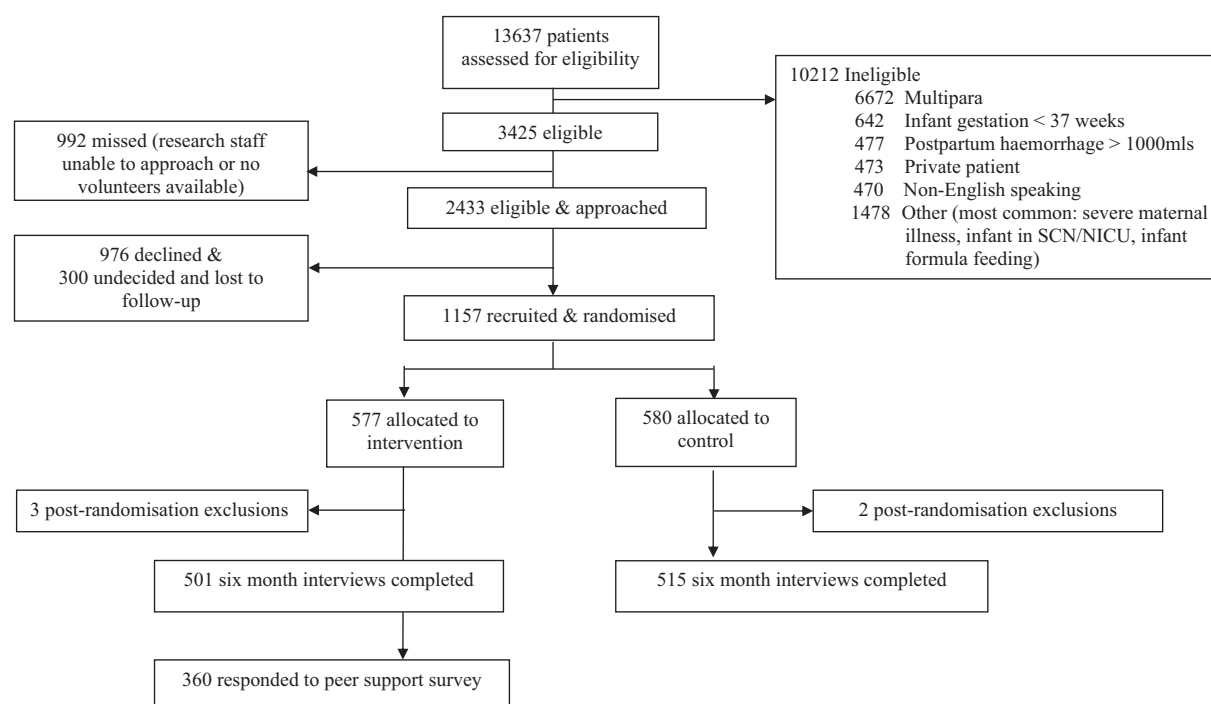
More infants of women assigned to proactive telephone-based peer support were receiving any breast milk at six months of age (376 [75%] of 501 assigned to peer support vs 354 [69%] of 515 assigned to usual care; Adj. RR 1.10; 95% CI 1.02, 1.18) (Table 3). There was weaker

**Table 1**  
Participant characteristics.

Characteristic	Intervention ( $n = 574$ )	Control ( $n = 578$ )
Maternal age at recruitment (years) mean (SD)	31.0 (5.0)	31.2 (4.7)
Married or living with partner	548 (95%)	537 (93%)
Education level graduate degree or higher	370 (64%)	404 (70%)
Household weekly income pre-tax (\$AUD)		
Less than \$1000	108 (19%)	104 (18%)
\$1000 to \$1999	200 (35%)	187 (32%)
\$2000 or more	199 (35%)	226 (39%)
Declined to answer	67 (12%)	61 (11%)
Pension or benefit ( $n = 507/517$ )	37 (7%)	26 (5%)
Born in Australia	275 (48%)	243 (42%)
English as first language	349 (61%)	354 (61%)
Smoked pre-pregnancy	77 (13%)	74 (13%)
Maternal BMI pre-pregnancy ( $n = 539/559$ )		
Underweight (<18.5)	29 (5%)	30 (5%)
Normal range (18.5–24.99)	362 (67%)	365 (65%)
Overweight (25–29.99)	91 (17%)	113 (20%)
Obese ( $\geq 30$ )	57 (11%)	51 (9%)
Onset of labour - spontaneous	296 (52%)	286 (50%)
Epidural analgesia for labour	255 (44%)	246 (43%)
Caesarean birth ( $n = 573/577$ )	162 (28%)	160 (28%)
Baby gestation at birth (weeks) ( $n = 574/575$ ) mean(SD)	39.5 (1.2)	39.4 (1.2)
Birthweight (grams) mean (SD)	3395 (453.7)	3380 (486.4)
Infant skin-to-skin immediately after birth	531 (93%)	535 (93%)
Infant admitted to neonatal/special care nursery	33 (6%)	41 (7%)
Received infant formula since birth, before recruitment	127 (22%)	164 (28%)
Plan to breastfeed six months or more	435 (76%)	468 (81%)

Data are  $n$  (%) or mean (SD). BMI = body mass index. Different  $n$  given where  $n <$  column  $n$ .

evidence of an association with infants receiving only breast milk (Adj. RR 1.10; 95% CI 0.97, 1.23). Women in the peer support group had a 23% lower risk of ceasing breast milk feeding than those in the usual care group (Adj. HR 0.77; 95% CI 0.61, 0.97, censored at 26 weeks) (shown graphically in Fig. 2). Adjusting for a potential peer clustering



**Fig. 1.** Participant flow chart.

effect made no difference to the point estimates, so none of the results are presented adjusted for cluster.

Other infant feeding outcomes are reported in Table 4. The reasons reported for ceasing breastfeeding by six months were similar in the two groups. Self-reported difficulties encountered with breastfeeding were also similar in each group (401 women in peer support group [80%] experienced difficulties as did 429 in the usual care group [83%]), as were a number of other infant feeding outcomes. Sources of infant feeding advice or help are also shown (Table 4).

#### 4. Discussion

We found that infants of first time mothers assigned to receive proactive telephone-based peer support for breastfeeding in the six months following birth were more likely to be receiving any breast milk at six months of age compared with women assigned to usual care. Women in the peer support group also had a longer duration of breastfeeding (censored at six months). There was weak evidence of an effect on infants receiving breast milk as their only milk feeding at six months of age.

The RUBY peer support intervention was planned to be delivered over a period of six months; however, of the women allocated to the intervention group, only one third of participant/volunteer pairs maintained contact for this length of time, and in one in ten cases, peer volunteers could not establish contact with mothers they had been allocated to support. Despite this, and with the varied 'dose' of peer support received, the intervention tested increased the proportion of women breastfeeding at six months – a finding similar to the Canadian RCT on which the current trial was modelled [12].

Our study adds important data to the most recent Cochrane review of breastfeeding, "Support for healthy breastfeeding mothers with healthy term babies", that concluded support provided predominantly by telephone is not more effective than usual care in increasing any breast milk feeding up to six months [10]. Our finding that infants of women in the intervention group were more likely to be receiving some breast milk at six months of age provide data from a significant number of women to add to the next update of this meta-analysis. In particular, the data will support further analysis of proactive (compared to reactive) telephone-based support, as well as lay versus professional support. Similarly, our findings will add to any update of the systematic review of peer support for breastfeeding continuation by Jolly et al. [11]; two out of the three key findings of that review are supported by our findings – that breastfeeding continuation was increased by peer support provided in the postnatal period only, and with at least 5 planned contacts. Our findings additionally demonstrate the potential for peer support to improve breastfeeding outcomes in a high-income setting. Given similar proportions of women in each group reported experiencing a breastfeeding problem, this trial also provides evidence that one

underlying mechanism of peer support is the peers assisting women to persevere through their difficulties and continue to breastfeed.

There is increasing literature on the importance of social relationships in both maintaining good health and in treating disease [25], and social support theory suggests that social connectedness and supportive interpersonal relationships are associated with more favourable health outcomes [26]. Dennis suggests that peer support is embedded in the social relationship construct, and that the peer support in the health context is a 'created' social relationship designed with a health outcome in mind [25]. Based on this, and Dennis' original peer support RCT [12], the peer volunteers in the RUBY study were trained to provide 'informational, emotional and appraisal' support in the created social relationship, which we consider to be the underlying mechanism aimed at facilitating wellbeing and social connectedness, and leading to improved breastfeeding outcomes. Using their experiential knowledge and training, the peers were able to offer a range of suggestions and strategies on parenting and feeding issues faced by the new mothers, with volunteer training emphasising the need to support the mother to come to her own decisions, and to refer the mother on for professional support as needed. Volunteers had been trained to provide emotional support through active listening, expressions of empathy and caring.

With health agencies under increasing pressure to deliver care in an efficient and cost-effective manner, a peer support intervention for breastfeeding women, such as that tested in our study, could greatly assist agencies wishing to 'protect, promote and support' breastfeeding. When contemplating the implementation and sustainability of a program of telephone-based peer support for breastfeeding, agencies should take this model into consideration; peer support offers a low-cost opportunity for long-term support across the first six months postpartum. In this 'real world' trial, where 10% of participants chose not to engage with their allocated peer supporter, and only one third of the relationships lasted the planned potential six months, the intervention resulted in a 6% absolute increase in breast milk feeding at six months. While this was less than the 14% increase reported in the similar Canadian study [12], our findings showed an increase sustained to six months (the Canadian study measured infant feeding to only three months), and that women in the peer support group had a 23% lower risk of ceasing breast milk feeding than those in the usual care group, so we consider that further implementation of this model is a viable option for scale-up, and one that is not overly burdensome on peer volunteers. If applied to the Australian context, with more than 300,000 births per year [27], a 6% increase in breast milk feeding would translate to at least 18,000 more infants receiving breast milk to at least six months, with all the benefits that confers.

The findings of our study should be interpreted in context – we had a selected group of primiparous women from three public maternity facilities in Melbourne, Australia. It is not possible to say if the results would be the same in a different population. In light of the increasing gap in breastfeeding duration between the most and least disadvantaged groups in Australia [28], we deliberately chose these sites given they provide care to relatively disadvantaged women, although no measures of social circumstance were applied to trial eligibility criteria. Compared to all women giving birth in Australia, the women in this study were of a similar age (31 years vs 30.5 years for all women), had a similar rate of onset of spontaneous labour (51% vs 48% nationally); and were less likely to be overweight or obese (28% vs 45%) or have a caesarean birth (28% vs 34%) (although the national figures include multiparous women) [27]. The women who participated were less likely to have an average weekly household income less than \$1000 AUD (19% vs 32% nationally [although the latter includes all age groups]) [29].

It was not possible to mask the participants to trial arm due to the nature of the intervention, however the investigators were masked to trial arm at all stages of data collection, data cleaning and primary analysis. Breastfeeding rates in both trial arms were higher than national figures (the most recent showing that 61% of infants are receiving at least

**Table 2**  
Intervention fidelity.

Peer support provided (intervention group only)		
Length of support	n (%) (n = 579)	Number of calls <sup>a</sup> median (range) (n = 418)
Never made contact	61 (11%)	–
Up to 4 weeks	153 (26%)	2 (1–5)
4 weeks to <8 weeks	58 (10%) <sup>b</sup>	4 (1–9)
8 weeks to <12 weeks	50 (9%)	7 (3–14)
12 weeks to <16 weeks	39 (7%) <sup>b</sup>	6.5 (1–13)
16 weeks to <20 weeks	22 (4%)	7 (3–15)
20 weeks to 26 completed weeks	196 (34%) <sup>b</sup>	11 (1–24)

<sup>a</sup> Data derived from peer volunteer call logs (n = 418) and when not submitted, from field notes collected directly by the volunteer coordinator at the time contact was ceased.

<sup>b</sup> In four instances (one each in the 8 and 16 weeks categories and two in the 26 category) only one contact was verbal; multiple texts were recorded for the subsequent support. Data are n (%).



**Table 3**  
Infant feeding outcomes at 6 months.

Outcome	Intervention (n = 501)	Control (n = 515)	RR (or HR)	95% CI	Adj RR (or HR)	95% CI
Primary outcome						
Any breast milk at six months	376 (75%)	354 (69%)	1.09	1.01, 1.18	1.10 <sup>a</sup>	1.02, 1.18
Secondary outcomes						
Only breast milk <sup>b</sup> at six months	268 (54%)	249 (48%)	1.11	0.98, 1.25	1.10 <sup>a</sup>	0.97, 1.23
Duration of any breast milk feeding (survival analysis, hazard estimate for risk of ceasing, Cox regression)			HR 0.78	0.62, 0.99	HR 0.77 <sup>a</sup>	0.61, 0.97

Data are n (%), RR (95% CI).

<sup>a</sup> Adj RR – Adjusted for breastfeeding intention, formula given (prior to recruitment), site, HR Hazard Ratio.

<sup>b</sup> May include solid foods and non-milk fluids.

some breast milk at six months of age [5]), suggesting a limitation, as highly motivated women were perhaps more likely to participate in the study; those who were less motivated, or planning a short duration of breastfeeding, may have been more likely to decline participation.

Our large adequately powered RCT provides evidence that volunteer lay support provided by telephone can increase breastfeeding to six months in primiparous women – an important finding given how difficult it is to increase breastfeeding duration. Offering first time mothers telephone-based support from a peer who has herself breastfed for at least six months is a relatively low-cost intervention for increasing breastfeeding maintenance in settings with high breastfeeding initiation. Given the ease with which peer volunteers were recruited, trained and retained in the study, the intervention has potential for widespread implementation at a population level in settings where breastfeeding support organisations such as ABA already exist, and could be scaled up with very little need for extra infrastructure.

## Contributors

DAF and LHA conceived the project. All authors contributed to study design, including data collection tools and study processes. DAF, LHA and FM undertook the literature review. DAF, LHA, HLM, MAD, RS and LG wrote the initial funding applications. DAF and FM prepared the data and did the statistical analysis. All authors contributed to data interpretation. DAF and FM wrote the first draft of the manuscript. All authors contributed to manuscript revisions.

## Declaration of Interests

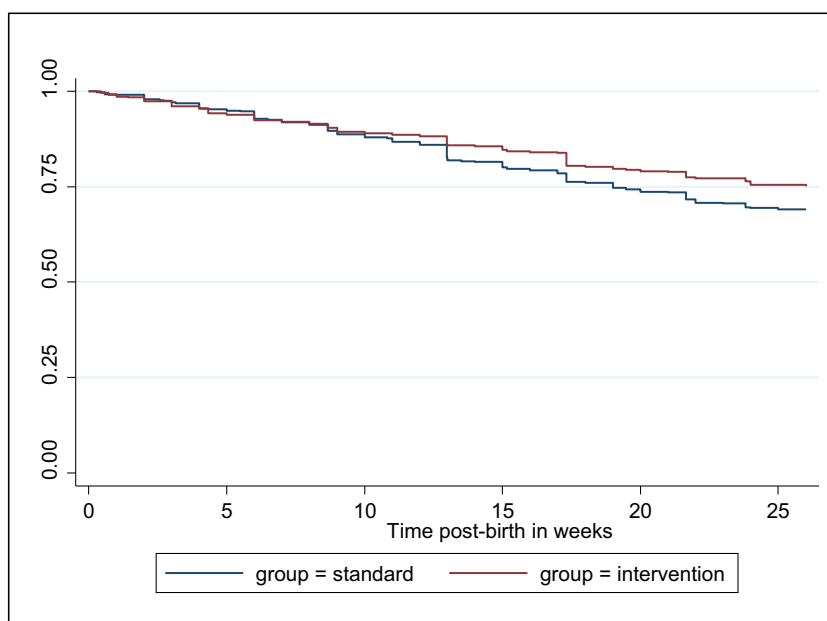
We declare there are no competing interests. Funding was received from the Felton Bequest for the study, and a PhD scholarship was provided by La Trobe University.

## Data Sharing Statement

Data collected for the study that contributed to this paper, including de-identified individual participant data and a data dictionary defining each field in the set, will be made available to others after publication of the paper for use by other researchers for further analysis unspecified in the RUBY publication plan, with investigator support, after ethical approval including scientific review of a proposal, and with a signed data access agreement.

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**Fig. 2.** Breastfeeding maintenance, by trial group (Kaplan–Meier survival estimates, censored at 26 weeks).

**Table 4**  
Other maternal and infant outcomes at 6 months.

Outcome	Intervention (n = 501)	Control (n = 515)
Other infant feeding outcomes		
Had commenced solids by 26 weeks (n = 488/508)	413 (85%)	428 (84%)
Had commenced solids before 21 weeks (n = 488/508)	185 (38%)	188 (37%)
Had commenced fluids other than breast milk <sup>a</sup> or formula before 26 weeks (n = 499/514)	289 (58%)	294 (57%)
Had commenced fluids other than breast milk <sup>a</sup> or formula before 21 weeks (n = 495/513)	121 (24%)	119 (23%)
Self-reported breastfeeding problems (reported at six months) <sup>b</sup>		
Difficulties attaching	199 (40%)	231 (45%)
Milk supply-low	132 (36%)	136 (26%)
Cracked nipples	106 (21%)	123 (24%)
Mastitis	51 (10%)	58 (11%)
Sore/painful nipples	51 (10%)	43 (8%)
Infant tongue-tie	46 (9%)	44 (9%)
Infant excess weight loss	40 (8%)	33 (6%)
Infant inadequate weight gain	35 (7%)	44 (9%)
Infant jaundice/very sleepy	34 (7%)	26 (5%)
Nipple/breast thrush	34 (7%)	33 (6%)
Infant very unsettled/reflux	31 (6%)	36 (7%)
Milk supply - too much	21 (4%)	30 (6%)
Breast refusal	16 (3%)	14 (3%)
Blocked duct	15 (3%)	26 (5%)
Other (e.g. nipple vasospasm, fussy baby, inverted nipples) <sup>c</sup>	123 (25%)	119 (23%)
Reasons for stopping breastfeeding (if ceased before 6 months postpartum) (n = 125/161) <sup>b</sup>		
Felt there was not enough milk/did not know if baby had enough milk	91 (73%)	119 (74%)
Unable to get baby to attach/suck/difficulties attaching baby to the breast	29 (23%)	22 (14%)
Baby didn't put on enough weight	18 (14%)	17 (11%)
Baby lost interest/always looking around/stopping & starting feed	13 (10%)	14 (9%)
Had to return to work	12 (10%)	22 (14%)
Feeling run down/tired/exhausted	10 (8%)	22 (14%)
Did not want to breastfeed/did not want to breastfeed any longer	10 (8%)	10 (6%)
Mental health-stressful/anxiety	7 (6%)	14 (8%)
Mastitis	6 (5%)	6 (4%)
Advice from health professional	5 (4%)	3 (2%)
Nipple pain	5 (4%)	14 (9%)
Taking medication	2 (2%)	8 (5%)
Other	25 (20%)	39 (24%)
Maternal characteristics at six months		
EPDS (percentage of women with score $\geq 13$ ) (n = 485/504)	34 (7%)	23 (5%)
In paid work, any fraction (n = 496/512)	114 (23%)	117 (23%)
Smoking currently (n = 495/511)	34 (8%)	30 (7%)
Had sought help or advice on infant feeding since leaving hospital after the birth (n = 500/514)	451 (90%)	436 (85%) <sup>d</sup>
Sources of help or advice on infant feeding		
Asked own mother or other family member for infant feeding advice (n = 446/434)	111 (25%)	136 (31%) <sup>d</sup>
Used internet sites for advice (n = 441/426)	110 (25%)	131 (31%) <sup>d</sup>
Saw lactation consultant at birth hospital (n = 442/424)	98 (22%)	127 (30%) <sup>d</sup>
Rang ABA telephone helpline (n = 441/423)	96 (22%)	88 (21%)
Saw lactation consultant in local government area of residence (n = 440/423)	54 (12%)	74 (17%) <sup>d</sup>
Asked other mothers for infant feeding advice (n = 444/425)	75 (17%)	73 (17%)
Read books for advice (n = 434/415)	35 (8%)	43 (10%)

Data are n (%).

<sup>a</sup> 99% in both groups had received water and 6% intervention/5% control had received fruit juice.

<sup>b</sup> Could have more than one response, thus % can add to more than 100.

<sup>c</sup> Any category with <15 respondents is classified in 'Other' category.

<sup>d</sup> p-Value from Chi-square comparison  $\leq 0.05$ .

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The funder of the study had no role in study design, data collection, data analysis, data interpretation, or writing of the report. The corresponding author DAF, and FMc had full access to all the data in the study and DAF had final responsibility for the decision to submit for publication.

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***Forthcoming chapter***

The next chapter (**Chapter 4**) provides a literature review on the concept of peer support and presents evidence for the use of breastfeeding peer support interventions to promote breastfeeding maintenance. Evidence related to the experience of those providing peers support interventions will also be reviewed

## Chapter 4 Literature review

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The previous chapters (1-3) aimed to establish the context for this thesis. An overview of historical and social influences was presented to highlight how breastfeeding has long been influenced, undermined and at times supported by social and cultural pressures. The support needs of breastfeeding mothers were established as being crucial for breastfeeding maintenance. The contemporary breastfeeding landscape was described which asserts Australia as a context of high breastfeeding initiation coupled with breastfeeding duration rates which indicate many infants do not receive breast milk for the six-month duration as recommended by WHO (World Health Organization/ UNICEF, 2003). There is evidence to suggest that peer support can increase rate of breastfeeding maintenance during the first six months postpartum, including evidence from the RUBY RCT presented in the previous chapter (Dennis et al., 2002; Forster et al., 2019; Jolly, Ingram, Khan, et al., 2012; McFadden et al., 2017).

This chapter will provide a focused discussion of the evidence for peer support as an intervention to improve breastfeeding outcomes. The aims of this chapter are to:

- describe the concept of peer support;
- outline models of one-to-one peer support;
- discuss the evidence for breastfeeding peer support; and
- review the literature related to the motivations and experiences of those providing breastfeeding peer support.

A variety of terms are used in the health literature to describe those who provide peer support. Descriptive terms are encountered, such as 'lay support worker', 'peer advisor', 'peer helper' or 'volunteer health work', 'peer supporter' and 'volunteer peer'. In this thesis, the volunteers who provided the peer support intervention will be referred to as either 'volunteers', 'peer volunteers' 'peers' or 'peer supporters'.

## CONCEPTUALISING PEER SUPPORT

*Peer support is as old as humankind. The concept sounds simple but making it an effective part of health and healthcare is both an art and a science (Peers for Progress, 2021)*

The concept of peer support is embedded within the ‘social relationship’ construct and emerges through ‘created social networks’ (Dennis, 2003a). It is a relatively recent addition to the health literature (Dennis, 2003b; Simmons, Bunn, Cohn, & Graffy, 2013). Dennis undertook a concept analysis of ‘peer support’ as it was applied within the healthcare literature related to the following domains: ‘transitional stressors’ (e.g., childbirth), ‘situational stressors’ (e.g., chronic disease) and ‘health promotion’ (e.g., supporting healthy behaviours) (Dennis, 2003a). Dennis acknowledges that whilst it may be useful to consider peer support in relation to these three domains, clear delineation is not always possible. For example, challenges arising for breastfeeding mothers may be considered ‘transitional’ from a life-course perspective, whereas from a community perspective, supporting breastfeeding continuation is a health promotion strategy that aims to improve the health of mothers and infants. The widely cited definition of ‘peer support’ emerging from Dennis’s work is:

*Peer support, within the healthcare context, is the provision of emotional, appraisal, and informational assistance by a created social network member who possesses experiential knowledge of a specific behaviour or stressor and similar characteristics as the target population, to address a health-related issue of a potentially or actually stressed focal person. (Dennis, 2003b, p. 329)*

Dennis’s definition of peer support encompasses three of the key functions of social support as originally described by House; emotional, appraisal, and informational support (House, 1981). A fourth dimension, instrumental support (e.g., tangible or material help), is omitted from Dennis’s concept analysis as her analysis found it was rarely a feature in peer relationships in the healthcare context (Dennis, 2003a).

Cochrane reviews of the peer support literature have emphasised slightly different aspects of peer support. One such review by Dale et al., (2008 , p. 2) which assessed the effects of peer support telephone calls on physical, psychological, and behavioural health outcomes, defines a peer supporter as ‘a created source of support, internal to a community, who shares salient target populations similarities and possesses specific knowledge that is concrete, pragmatic and derived from personal experience rather than formal training’. The three elements of peer support identified by Dennis (2003b), i.e., information, emotional, appraisal support, were also identified following thematic analysis studies included in Dale et al.’s review (2008). In contrast, in a review evaluating the literature related to peer support interventions for parents and carers of children with complex needs, Sartore et al., (2013) defined peer support ‘as the existence of a community of common interest where people gather (in person or virtually by telephone or computer) to share experiences, ask questions, and provide emotional support and self-help’. (Eysenbach, Powell, Englesakis, Rizo, & Stern, 2004; Iscoe, 1985 in Sartore et al., 2013, p. 2)

The above definitions do not reflect the ongoing support provided by peer support relationships, which may extend over time. In the context of global diabetes management, representatives from 20 countries contributed to a definition of peer support developed by Peers for Progress, an initiative of the World Health Organization Initiative (Boothroyd & Fisher, 2010). The final definition focused more on the core functions served by peer support which the authors argue enables flexible implementation in diverse settings (Boothroyd & Fisher, 2010; Fisher, Tang, Coufal, Liu, & Jia, 2018). Using this approach, four key functions of peer support are identified: (i) providing assistance in daily management of health behaviours; (ii) social and emotional support helping recipients to overcome challenges and stay motivated; (iii) linking recipients to clinical and community resources; and (iv) providing ongoing support, extended over time (Fisher et al., 2014, p. 372). This temporal element of peer support relationships is relevant to breastfeeding support which may extend for several months postpartum.

Consistent features of existing definitions of peer support are that the relationships are 'created' and do not arise organically from within a community; the relationship is intentional and directed to some extent by protocols; the relationship comprises individuals that are similar in some regard; and salient experiential knowledge is shared within the relationship (Dale et al., 2008; Dennis, 2003b; Simmons et al., 2013; Simoni, Franks, Lehavot, & Yard, 2011). While these definitions provide a loose boundary around the concept of peer support, peer support interventions vary in numerous aspects including who the peers are, the level of training, the setting, delivery and the scope of the role (Simmons et al., 2013; Trickey et al., 2018). This heterogeneity of interventions described in the peer support literature presents challenges for those seeking to compare outcomes (Dale et al., 2008; Jolly, Ingram, Khan, et al., 2012; McFadden et al., 2017; Simoni et al., 2011; Trickey et al., 2018).

There have been attempts to identify the theoretical underpinning of peer support interventions operating in experimental contexts, however findings have generally been that such interventions are heterogeneous and under-theorised (Trickey et al., 2018). The theoretical approach to peer support interventions is dependent on assumptions about the mechanisms of action, desired outcomes, and characteristics of the target population (Simoni et al., 2011). Simoni et al., (2011) suggest that the theoretical underpinnings of behavioural change interventions relate to one of the five areas: education, social support, social norms, self-efficacy, and patient advocacy. According to Simoni et al., (2011), once the area of theoretical relevance is identified, clear justification for how peers would achieve desired outcomes is required. The potential theories that may inform a peer support intervention are likely to reflect the diversity of the interventions themselves. Simmons et al., (2013, p. 68) argue 'perhaps unlike other theory-based interventions, ... the dynamics of flexibility and variability are at the heart of the [peer support] intervention; allowing patients to negotiate the meaning of their experiences together is the very thing peer support seeks to enable'.

In conclusion, peer support is a multifaceted intervention that may be flexibly adopted in diverse settings. However, this does not obviate the need to clearly identify the proposed mechanism(s) of action and to align the intervention with dimensions of peer



support (informational, appraisal, emotional support and instrumental) likely to achieve the desired outcomes.

## MODELS OF PEER SUPPORT

In the health context, peer support interventions have been used to support those experiencing specific disease related issues, to prevent illness and in the field of health promotion (Dale et al., 2008). No single model of peer support exists, and each model of peer support reflects the overall purpose of the program, proposed mechanism of change and program's goals. Models vary across several dimensions including the mode, frequency and timing of delivery, the role and training undertaken by the peer, alignment with existing health services and whether support is offered to individuals or in a group setting. It is difficult to draw definitive conclusions about the aspects of programs that are the most effective elements (Dale et al., 2009).

Peer support programs aim to facilitate positive social support which has a direct influence on health outcomes (Fisher, Tang, et al., 2018) and helps to buffer against stressors (Dennis, 2003b). Systematic reviews of evidence related to breastfeeding support (McFadden et al., 2017), breastfeeding peer support (Jolly, Ingram, Khan, et al., 2012), and telephone support (Lavender, Richens, Milan, Smyth, & Dowswell, 2013) highlight important aspects of interventions tested in empirical studies. Key findings relevant to providing one-to-one breastfeeding peer support are included in the following section.

### **Proactive or reactive peer support**

Peer support may engage with recipients either proactively or reactively. Proactive models generally have a schedule of contacts initiated by the peer, whereas reactive support is provided on request from the recipient. Mother-to-mother support groups such as the ABA and La Leche League International have traditionally relied on the women themselves actively seeking support (Forster et al., 2014). While authors in the broader peer support field highlight the need for programs using peer support models to

actively engage with individuals, the evidence for the effectiveness of such approaches remains unclear (Fisher, Bhushan, et al., 2018).

A limitation when comparing the effectiveness of studies testing proactive or reactive interventions, is that most describe at least one proactive contact, usually to establish contact with recipients, even if the ongoing plan is for reactive support (McFadden et al., 2017; Renfrew et al., 2012). The two most recent Cochrane reviews comparing extra support for healthy breastfeeding mothers of healthy term babies with usual maternity care, were unable to undertake planned sub-group analysis of studies according to whether they delivered support proactively or reactively as the blended approaches of many studies prevented dichotomous categorisation (McFadden et al., 2017; Renfrew et al., 2012). Based on findings from five studies in which support was only delivered reactively with no difference in outcome between those allocated to the peer support group and those receiving standard care, Renfrew et al., (2012) concluded that support only offered reactively is less likely to be effective compared with proactive support. The updated Cochrane review undertaken by McFadden et al., was unable to draw a conclusion regarding the relative benefit of proactive versus reactive peer support (2017).

A realist review of 15 experimental studies testing one-to-one breastfeeding peer support interventions, examined each study as a 'case' (Trickey et al., 2018). Analysis of each 'case' included not only the primary study paper, but also related process evaluations, qualitative studies, secondary analyses, intervention protocols, training manuals and personal correspondence with authors. The review conducted a cross-case comparison of context-mechanism-outcome relationships which resulted in development of evidence-based statements. Findings from this review support a negotiated proactive model of peer support. The intention in such models is that a minimum number of calls is specified to align with the intensity recommend by previous studies for efficacy whilst allowing the number of calls beyond that to be tailored to the mother's needs (Trickey et al., 2018).

## **Mode of support (face-to-face or by telephone, or both)**

Breastfeeding peer support programs are delivered using a range of modalities including face-to-face (Anderson, Damio, Young, Chapman, & Pérez-Escamilla, 2005; Chapman, Damio, Young, & Perez-Escamilla, 2004; Jolly, Ingram, Freemantle, et al., 2012), group-based (Grant et al., 2018), telephone (Dennis et al., 2002; Di Meglio, McDermott, & Klein, 2010) or web-based such as those delivered via social networking groups (Bridges, Howell, & Schmied, 2018; Regan & Brown, 2019). A systematic review of 15 studies investigating the effectiveness of peer support on breastfeeding found most studies offered peer support face-to-face, in the recipient's home (Jolly, Ingram, Khan, et al., 2012). A study of the availability of breastfeeding peer support in the U.K. highlighted how access to peer support services may vary across geographical regions (Grant et al., 2018). Digital peer support offered via telephone, text or web-based modalities may allow peers to deliver support more widely (Fisher, Bhushan, et al., 2018). Telephone support may be responsively or proactively delivered (Lavender et al., 2013) and telephone contact may be used in combination with face-to-face contacts (McFadden et al., 2017). Telephone peer support may be more accessible for recipients who are unable to attend face-to-face programs, or who are uncomfortable inviting a peer supporter into their homes. The advantage of increased accessibility is also a finding of more recent studies of peer support offered via social networking platforms (Grant et al., 2018; Regan & Brown, 2019).

Studies of telephone-based breastfeeding support have shown mixed results in terms of extending breastfeeding duration. A Canadian RCT (Dennis et al., 2002) demonstrated significantly more mothers in the telephone peer support group continued to breastfeed at three months postpartum, compared to the control group (81.1% vs. 66.9%,  $P = 0.01$ ). The trial also reported a difference between groups in terms of exclusive breastfeeding (56.8% vs. 40.3%,  $p = 0.01$ ). Further evidence for a positive effect of peer support on breastfeeding duration was reported in a trial conducted within the US Department of Agriculture's Supplemental Program for Women, Infants, and Children (WIC) (Reeder, Joyce, Sibley, Arnold, & Altindag, 2014). In this trial, WIC participants in four local agencies were randomly assigned to one of three study arms of the telephone peer counselling program: no peer counselling, four telephone contacts, or eight telephone

contacts. The intervention began during pregnancy and continued postpartum. Breastfeeding duration in the groups who received peer support was greater at six months compared to women in the comparison group who received no peer support (adjusted relative risk: 1.18; 95% confidence interval [CI]: 1.03–1.34). In terms of exclusive breastfeeding, the difference between groups was not significant (adjusted relative risk: 1.01; 95% confidence interval [CI]: 0.85–1.20) (Reeder et al., 2014). In contrast, a trial designed to test the effect of telephone peer support on breastfeeding duration among young mothers, reported no significant difference in ‘any’ breastfeeding between the group who received peer support and the control group (median 75 days in the intervention group vs. 35 days in the control group,  $p = 0.26$ ). An interesting finding in this study was that the duration of exclusive breastfeeding was increased in the intervention group (median 35 days vs. 10 days,  $p = 0.004$ ) (Di Meglio et al., 2010). In conclusion, while there is some encouraging evidence for the effectiveness of peer support intervention to increase the duration of breastfeeding, the overall effectiveness is unclear.

A Cochrane systematic review of 27 randomised controlled trials compared telephone support during the first six weeks postpartum with routine care or with another supportive intervention (Lavender et al., 2013). The review included nine trials reporting outcomes related to breastfeeding (any, and or exclusive breastfeeding), and five trials reporting breastfeeding continuation at six months postpartum. Sub-group analysis of those trials in which the intervention was delivered by peer supporters and breastfeeding continuation at six months postpartum (Dennis et al., 2002; Mongeon & Allard, 1995; Pugh, Milligan, Frick, Spatz, & Bronner, 2002) was not undertaken. However, analysis of trial outcomes for all studies reporting breastfeeding maintenance at six months concluded women who received telephone support were more likely to be breastfeeding at six months (RR 1.21, 95% CI 1.06 to 1.38).

A Cochrane review of studies testing breastfeeding support interventions included 73 studies, of which 47 offered a mixed model of peer support, including some telephone contacts, and only four studies offered contact only by telephone (McFadden et al.,

2017). A sub-group meta-analysis comparing studies providing predominantly face-to-face support with those providing telephone support, and those providing a combination of face-to-face and telephone support reported no difference in cessation of *any* breastfeeding at up to six months according to type of support. However, there was evidence of a positive association between receiving face-to-face breastfeeding support and a reduced risk of cessation of *exclusive* breastfeeding at up to six months. The authors advise caution in interpreting these results due to high within-group heterogeneity (McFadden et al., 2017).

### **Intensity of the intervention**

Peer support should be tailored to the needs and preferences of the recipient (Renfrew et al., 2012) and as such, a negotiated model of support has been advocated (Trickey et al., 2018). One-to-one models offer more flexibility and increase the participant's ability to individualise the contacts to suit their schedules and availability (Webel, Okonsky, Trompeta, & Holzemer, 2010). However, the evidence for a minimum 'dose' or number of peer contacts is growing (Jolly, Ingram, Khan, et al., 2012). Jolly et al., (2012) systematic review of 60 studies reporting the intensity of the postnatal breastfeeding peer support interventions concluded that women who received  $\geq 5$  planned contacts had a significantly lower risk of not breastfeeding at follow-up compared to women who received 'usual care'. Peer support provided at a low intensity ( $<5$  planned contacts) was found to be ineffective for improving rates of any breastfeeding at follow-up. This difference was not observed for rates of exclusive breastfeeding.

In terms of the duration of each contact between the peer and mother, this is rarely reported. In an early RCT testing telephone peer support, Dennis (2002) reported the mean duration of interactions was 16.2 +/- 12.22 minutes, ranging from 2 to 65 minutes. There is currently insufficient evidence to determine if there is an optimal duration of calls for those interventions offering telephone peer support.

## **The setting in which peer support is provided**

The setting in which peer support is undertaken is a non-modifiable factor that may influence the effectiveness of breastfeeding peer support programs. Evidence suggests both the income level of a country and its background breastfeeding rate may exert an effect on the success of peer support programs (Jolly, Ingram, Khan, et al., 2012). Countries are broadly grouped into 'low-income', middle-income' and high-income' categories based on a measure of national income-per-person (The World Bank, 2019). A strong inverse relationship exists between a country's income ranking and breastfeeding rates; lower rates of breastfeeding, as measured by indicators including 'early initiation of breastfeeding', 'ever breastfed', 'exclusive breastfeeding at 0–5 months', and 'breastfeeding at 6 months', are seen with increasing wealth of countries (Victora et al., 2016). However, despite the trend for high-income countries to have lower rates of breastfeeding compared to lower-income countries, there are differences within countries. In high-income countries, women from higher socioeconomic groups are more likely to initiate breastfeeding than women from lower socioeconomic groups (Victora et al., 2016). McFadden (2017) advises caution when comparing breastfeeding rates according to income status and highlights the disparity in breastfeeding initiation and continuation amongst high-income countries.

There is evidence, however, to suggest a country's income group influences the effectiveness of breastfeeding peer support interventions (Jolly, Ingram, Khan, et al., 2012). Jolly's (2012) systematic review and meta-analyses of 17 studies, demonstrated a significant difference in outcomes between groups exposed to a peer support intervention in high-income countries compared with low or middle-income countries. The review found peer support was more likely to be effective in low- and middle-income countries compared with high-income settings. This difference was observed for both any ( $P < 0.001$ ) and exclusive ( $P = 0.01$ ) breastfeeding outcomes (Jolly, Ingram, Khan, et al., 2012).

Background rates of breastfeeding within a country may therefore be an important determinant of the success of breastfeeding support interventions. The most recent Cochrane review examined the effectiveness of breastfeeding support interventions

according to background rates of breastfeeding within each country (low (<60% ever breastfed), medium (60-80% ever breastfed) or high (≥80% ever breastfed)) (McFadden et al., 2017). McFadden et al., (2017) concluded that breastfeeding peer support interventions offered in countries with high background rates were more likely to reduce the risk of cessation of exclusive breastfeeding compared with standard care, although this effect was not extended to cessation of any breastfeeding.

## WHO PROVIDES BREASTFEEDING PEER SUPPORT?

Dennis situates peer support on a continuum between 'lay' and 'professional' support and distinguishes it from support provided by an individual's family or immediate social network (Dennis, 2003b). By definition, peers share the experience of a specific behaviour and have corresponding characteristics to the target population (Nankunda, Tumwine, Nankabirwa, & Tylleskär, 2010). The extent to which the sociodemographic characteristics match those of the recipients has been the subject of discussion and the precise characteristics that should be matched is unknown (Fisher et al., 2014). The literature on helping behaviour suggests people are more likely to help those who they perceive to be like themselves (Stukas, Snyder, & Clary, 2015). The principle of homophily refers to the tendency for people to have stronger ties with people who are similar to themselves in terms of sociodemographic and behavioural characteristics (McPherson, Smith-Lovin, & Cook, 2001). An extension of this premise is that individuals will be alike on some of these factors by virtue of living in the same community (Harris et al., 2015). Whilst shared characteristics and experiences are important in peer relationships, differences may enable the peer to fulfil specific needs for the mothers such as insights into cultural and language differences (McLeish & Redshaw, 2015).

Programs usually aim to recruit peers from the local community (McInnes & Stone, 2001; Miharshahi et al., 2019; Olson, Haider, Vangjel, Bolton, & Gold, 2008; Thomson & Crossland, 2019). This has obvious practical benefits related to proximity to venues, especially for those programs offering face-to-face support. Focusing recruitment of peers from within a local community may also result in a cohort of peers that reflects local socioeconomic diversity.

Women who provide breastfeeding peer support have usually successfully breastfed for a specified period of time. Jolly (2012) reported in a systematic review of 17 trials on breastfeeding peer support that the length of breastfeeding experience is frequently unspecified. Whilst the relevance of the duration of the peers own breastfeeding experience is unclear, it has been reported that women who provide breastfeeding support have usually breastfed for much longer than the socio-cultural 'norm' of their communities and as such could be considered 'positive deviants' regarding their breastfeeding outcomes (Gross et al., 2017; Tawia et al., 2019).

Peer support programs provide training which varies considerably in structure and duration across different programs, to complement peers' experiential knowledge. Sessions usually encompass commonly reported breastfeeding concerns such as difficulty with infant feeding at the breast, breastfeeding pain and milk quantity (Australian Institute of Health and Welfare, 2011; Wagner, Chantry, Dewey, & Nommsen-Rivers, 2013), and may include topics that highlight techniques in providing effective informational, emotional and appraisal support (Dennis, 2003b). Interpersonal skills are a central focus of most training sessions, with adopting a non-judgemental attitude and active listening being common topics, as is using role play as a teaching modality. Extensive training may impact the specific 'peer' qualities that are desired, that is, to position peers more toward the paraprofessional end of the continuum between lay helper and paraprofessional (Dennis, 2003b; Fisher, Tang, et al., 2018).

## WHAT IS THE EVIDENCE FOR PEER SUPPORT INTERVENTION IN BREASTFEEDING MAINTENANCE?

Overall, the evidence for the effectiveness of breastfeeding peer support on breastfeeding has been mixed. A Canadian trial implemented proactive telephone support by volunteer peers who had themselves successfully breastfed (and who were trained to provide support) demonstrated a significant increase in the proportion of women breastfeeding at three months; 81% compared with 67% in the control group, with no evidence of adverse effects (Dennis et al., 2002). A systematic review and meta-



analyses by Jolly et al., (2012) examined the effectiveness of peer support on breastfeeding continuation of any and of exclusive breastfeeding. The review included 17 randomised controlled trials, 15 of which were included in meta-analyses. The review aimed to examine the effect of setting (i.e., high/ low/middle-income countries), intensity (i.e., number of contacts more or less than five), and timing of peer support (i.e., combined antenatal and postnatal or postnatal only) on breastfeeding continuation. In relation to the timing of support, the key finding from this review was that interventions provided in the postnatal period only, significantly reduced the risk of not breastfeeding compared with peer support provided in both the antenatal and postnatal periods ( $P < 0.001$ ). However, it is argued that models offering both antenatal and postnatal support may also include women who are less motivated to initiate or maintain breastfeeding (Jolly, Ingram, Khan, et al., 2012).

A Cochrane systematic review examining support for healthy breastfeeding mothers with healthy term babies analysed data from 73 randomised or quasi-randomised controlled trials involving more than 74,656 mother-infant pairs (McFadden et al., 2017). The study aimed to examine the effectiveness of different types of supportive interventions on breastfeeding outcomes. In relation to evidence for the effectiveness of peer support in promoting breastfeeding maintenance, the review concluded that all forms of extra breastfeeding support decreased the cessation of breastfeeding at six months postpartum (average RR 0.88, 95% CI 0.85 to 0.92;). Other findings suggested peer support is likely to be more effective supporting breastfeeding maintenance in settings with high initiation, that both lay and professional support are beneficial, and that face-to-face support is associated with better outcomes than telephone-only support (McFadden et al., 2017).

## WHAT ARE THE MOTIVATIONS AND EXPERIENCES OF VOLUNTEERS PROVIDING ONE-TO-ONE BREASTFEEDING PEER SUPPORT?

A review of the literature related to the experiences of those providing peer support interventions in the breastfeeding context was undertaken to establish the current knowledge in this area. The review included primary research studies which had

volunteer one-to-one breastfeeding peer support as the intervention and included findings related to the peers' experiences of providing support. Peer reviewed studies published in English between 2002 and February 2021 were included. The review included both qualitative and quantitative studies. The search terms used were 'peer', 'peer supporter', 'peer counsellor', 'lay support', 'social support' AND 'volunteer' AND 'breastfeeding', 'infant feeding' and 'lactation'. Databases searched were Embase, Medline, CINAHL, and PsychInfo.

A total of 14 papers were identified relevant to the experience of those providing voluntary one-to-one breastfeeding support. A table summarising the evidence is included as **Appendix B**. Nine studies were based or led in the United Kingdom (UK), and the remainder in Lebanon, Uganda, Canada, New Zealand and the USA. Ten studies used qualitative methods including a qualitative online questionnaire (n = 1) (Johnson, Ansley, Doolan-Noble, Turley, & Stokes, 2017), five used semi-structured interviews (Hopper & Skirton, 2016; Kabakian-Khasholian, Nimar, Ayash, Nasser, & Nabulsi, 2019; McLeish & Redshaw, 2015; Murphy, Cupples, Percy, Halliday, & Stewart, 2008; Thelwell, Rheeston, & Douglas, 2017) and four used focus groups (Curtis, Woodhill, & Stapleton, 2007; Ingram et al., 2020; Meier, Olson, Benton, Eghtedary, & Song, 2007; Nankunda et al., 2006). One study used a quantitative survey (Dennis, 2002) and two reported using mixed methods (Thomson & Crossland, 2019; Watt, McGlone, Russell, Tull, & Dowler, 2006). In addition, findings from a realist review of experimental studies using one-to-one breastfeeding peer support interventions were considered relevant and were included (Trickey et al., 2018).

Across the studies included in the review, volunteers reported a range of motivations for participating in peer support programs. For some it was rooted in an altruistic desire to help another woman to have a positive breastfeeding experience which for some women was coupled with a desire to repay the positive support they themselves had received (Hopper & Skirton, 2016; Ingram et al., 2020; Thelwell et al., 2017). Some peers highlighted how the role gave them a sense of purpose, when this was sometimes lacking during a break from paid employment (Thelwell et al., 2017). Undertaking the peer support role also offered opportunities for social connection with other adult

women, again something that may be lacking during breaks from employment such as maternity leave (Ingram et al., 2020). Some volunteers also viewed the peer support role as a pathway to future employment particularly in roles involving lactation support or maternity care (Hopper & Skirton, 2016).

The identified literature described mostly positive outcomes for peer volunteers. Benefits included gaining personal satisfaction through helping the recipient (Raine, 2003) and improved confidence and self-esteem (Curtis et al., 2007; Dennis, 2002; Raine, 2003). The volunteers in a Canadian RCT described a sense of personal growth which was brought about by feelings of enhanced self-esteem, reduced feelings of isolation through making connection with other women, feeling empowered and contributing to society (Dennis, 2002). There can be a shared experience of success when they perceive they can help a woman overcome breastfeeding challenges (Hopper & Skirton, 2016).

In addition, peers reported a sense of fulfilment gained through providing a quality breastfeeding support service in their local community, and subsequently being recognised for their knowledge and expertise within the community (Johnson et al., 2017). In most studies, community recognition was viewed positively, although Kabakian- Khasholian et al., (Kabakian-Khasholian et al., 2019) reported that peers sometimes encountered situations where they had to defend their breastfeeding choices and counter community beliefs:

*There are things that the social circle tells you: give formula to the infant, give pacifier (dummy), you don't have enough milk, the infant will not grow with mother's milk only. I answer with what I learned from the study and tell them this is science. I have stronger arguments now. (24 years old, one child). (Kabakian-Khasholian et al., 2019, p.9)*

Along with generally high levels of satisfaction, peer supporters have also identified challenges associated with the role. In a Canadian study offering peer support by telephone, most peers felt uncomfortable at least once, especially when making the first call, if the woman had stopped breastfeeding or she perceived the call wasn't appreciated (Dennis, 2002). The overall peer experience may be less satisfying if the

peers perceive help is not wanted and peers may be more responsive to those women who respond positively to the support (Trickey et al., 2018).

Peers who support women in hospital settings may face unique challenges related to boundaries between the health professional and peer support role (Curtis et al., 2007 ; Hopper & Skirton, 2016). Peers may encounter a lack of trust from health professionals, sometimes described as 'gate-keeping' and lack of clarity about the peer support role (Curtis et al., 2007; Hopper & Skirton, 2016). Positive outcomes for peers in these settings included a belief that they were doing something of value by offering women time to support breastfeeding, that was beyond the capacity of health professionals due to time constraints (Hopper & Skirton, 2016). Peers in health service settings also reported improved interpersonal skills and greater assertiveness when relating to health professionals, which extended beyond their peer support role (Curtis et al., 2007).

The logistics of arranging times to initiate and maintain contact with women can be time consuming and may also have an adverse effect on peers' morale (Dennis, 2002; Ingram et al., 2020; Murphy et al., 2008). Contact challenges may also stem from difficulties engaging with women from different language backgrounds (Meier et al., 2007). Cultural differences per se were not perceived as a barrier to establishing a relationship providing there were no significant language barriers. The woman's support network, including her family and friends could also present a barrier if they were not supportive of breastfeeding or the peer relationship (Murphy et al., 2008). Conversely, some peers have reported engaging with the woman's family to engender their support to help a woman continue breastfeeding (Kabakian-Khasholian et al., 2019; Murphy et al., 2008).

Breastfeeding peer support programs offer peers the opportunity to use their breastfeeding experience to make a positive contribution to their communities. Using women's personal knowledge and experience as a resource transforms it into something of value beyond the bounds of the program (Kabakian-Khasholian et al., 2019). For some peer supporters this can give them a sense of identity that is positively regarded by their families and wider community (Kabakian-Khasholian et al., 2019; Nankunda et al., 2006;

Raine, 2003). Raine (2003) summarised the capacity for the peer support role to positively impact both women and communities in the following quote:

*For women who may not perceive themselves as skilled, but as 'just normal mothers', simply being asked to train as a breast-feeding supporter may be personally empowering...Such external recognition is a new experience for many women, one that may help to boost personal confidence and self-esteem. Taking part in the training course then reinforces the perception that they have something of value to offer their community. For women living in disadvantaged areas, whose opportunities for self-advancement are few, this type of outcome should not be underestimated. (Raine, 2003, p. 468)*

Adequate training and preparation for the role and ongoing support from program organisers can assist volunteers to overcome challenges and provide some quality control (Dennis, 2002). An interesting finding from some studies was that despite significant variation in the training programs offered prior to commencement, the peers viewed their training positively and felt adequately prepared for the role (Dennis, 2002; Kabakian-Khasholian et al., 2019; Meier et al., 2007; Thelwell et al., 2017). Peers reported that the support provided encompassed emotional aspects as well as the provision of information. As such, skills in building trust and providing emotional support were an important aspect of training (Meier et al., 2007). Receiving ongoing support and recognition is also viewed as important (Meier et al., 2007). Offering opportunities for social contact between peers can help to maintain motivation and enhance learning through sharing of experiences (Dennis, 2002; Trickey et al., 2018).

Breastfeeding peer support programs may employ peer supporters in paid roles, employ a mix of professional and lay supporters, or only recruit lay supporters (McFadden et al., 2017). It is unclear whether payment is a factor in recruitment of volunteers, and no studies reporting on this issue were identified. Some studies describe provider incentives such as gift cards being given to volunteers (Di Meglio et al., 2010). The impact of such incentives is not reported. In the RUBY study, the volunteers were offered \$50 reimbursement for telephone calls, for each mother supported and this was claimed by volunteers for less than half of the periods of support (**Chapter 7**). A

Cochrane review which examined support for healthy breastfeeding mothers with healthy term infants (McFadden et al., 2017) concluded that support from non-professionals (including lay providers) was associated with similar rates of any breastfeeding at six months postpartum, compared to those who received professional support.

Examining peers' motivations to undertake volunteer peer support roles, and their experiences when providing peer support is an important aspect of process evaluation. For peer support to be a sustainable intervention that is integrated successfully into existing community breastfeeding pathways, ensuring the role is attractive and fulfills peers' overall motivations is paramount.

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### ***Forthcoming chapters 5 and 6***

This chapter has explored the literature associated with peer support with a specific focus on the views and experiences of those providing the support for breastfeeding. In the next two chapters, the theoretical underpinning (**Chapter 5**) and methodological approach (**Chapter 6**) for study are described. The aim of these chapters is to describe in detail the combination of methods adopted to address each of the research questions stated in **Chapter 1**.

## Chapter 5 Theoretical approaches

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*Numbers and findings on their own are no good. We need light in which to consider them, and context in which to locate them* (Dr Sarah Wickham)

The aim of this chapter is to outline the theories and concepts used in this thesis. This was a descriptive pragmatic study that used theoretical approaches to inform both data collection and as an interpretive tool to make sense of the data. The theoretical ‘bones’ of the thesis emerged as the study evolved. Three elements have contributed to the theoretical approach; (i) existing literature related to the topic under investigation, (ii) the relevance of specific theories and (iii) the researcher’s personal experiences of breastfeeding support. Existing literature related to breastfeeding peer support has been presented in **Chapter 2** and **Chapter 4**. Presented here is a discussion of theories and concepts relevant to the provision of the peer support intervention used in the RUBY RCT.

The view of peer support examined in this thesis is directed toward the experiences of volunteers who provided the proactive telephone peer support intervention to primiparous mothers during the first six-months of breastfeeding in the RUBY RCT. Consequently, the theoretical underpinnings described here do not aim to illuminate the position or experience of the recipients, which is being examined separately (McLardie-Hore, McLachlan, Shafiei, & Forster, 2020). This study explores the way in which maternal experiential knowledge can be harnessed as an asset that has value in promoting the health of new mothers and their infants by extending the duration of breastfeeding through social support mechanisms.

This chapter begins with a discussion of the concept of social support and its utility to this thesis. This leads into an overview of the concept of experiential knowledge (Borkman, 1976). Attention then shifts to asset-based approaches to health promotion (Morgan & Ziglio, 2007) including Antonovsky’s model of salutogenesis (Antonovsky, 1996) and a broad overview of Clary’s functional approach to volunteer motivation

(Clary et al., 1998). Key concepts of each of these approaches will be summarised, along with a discussion of the application to this thesis.

## **SOCIAL SUPPORT**

There is strong evidence of the positive relationship between social support and health (Cohen & Wills, 1985; Feeney & Collins, 2014; Gottlieb, 1987). The positive link between social support and breastfeeding initiation and duration is also well established (McFadden et al., 2017; Raj & Plichta, 1998; Vari, Camburn, & Henly, 2000). The literature related to social support is daunting in its diversity, volume, and breadth of applications, and multiple definitions are presented. In an analysis of the literature related to becoming a new parent, Williams et al., (2004) identified 30 definitions of social support which varied on factors such as duration, timing, structure, supportive resources and characteristics of the recipient and the provider. A broad definition of social support is the 'aid and assistance exchanged through social relationship and interpersonal transactions' (Heaney & Israel, 2008, p. 191). Social support can also be viewed from sociological perspectives which recognises an individual's community links or 'the extent of a person's social integration in the community (i.e., social network) and the resources provided by others that may be useful for helping to cope with problems (i.e., supportive functions)' (Wills & Ainette, 2011, p. 465).

It is beyond the scope of this thesis to undertake a theoretical examination of all dimensions of social support. The scope of discussion will be around aspects of social support relevant to the peers' relationships with the women they supported, and the aims of this thesis.

### **Types of social support**

Functional social support refers to the main purposes served by supportive behaviours within relationships (Holt-Lunstad & Uchino, 2015). House (1981) described four types of resources that may be exchanged within social support relationship:



- Emotional support (e.g., empathy, caring)
- Informational support (e.g., advice, information)
- Appraisal support (e.g., feedback aimed to encourage self-reflection)
- Instrumental support (tangible help such as money, or services such as home-help)

Emotional support has been identified as the most important, and most frequently offered type of support conveyed to others (Langford, Bowsher, Maloney, & Lillis, 1997). The second type of social support is instrumental support which is defined as the 'provision of tangible goods and services or tangible aid' (Langford et al., 1997, p. 96). Appraisal support is the 'communication of information relevant to self-evaluation, rather than problem solving' (Langford et al., 1997, p. 97). Appraisal support includes affirming the availability of sufficient personal resources to deal with a situation, providing reassurance that a problem is temporary, or that one may adapt to situations that cannot be changed or that the situation may lead to positive change (Feeney & Collins, 2014). The next type of support is informational support which involves the receipt of advice, suggestions, and/or information during times of stress (Langford et al., 1997).

### **Stress buffering**

Studies linking social support to health are predominantly situated within the 'stress and coping' paradigm (Feeney & Collins, 2014; Shumaker, 1984; Thoits, 2011; Williams et al., 2004). According to this theory, stress occurs when situations are interpreted negatively and one perceives that they do not possess or do not use adequate coping responses (Cohen & Wills, 1985). The stress-buffering model proposes that social support contributes to health in two ways; firstly, by ameliorating the negative impact of stressful events on health and secondly by providing beneficial resources to promote health in everyday life (Cohen & Wills, 1985; Gottlieb, 1987).

Social support reduces stress by influencing the way in which a situation is appraised as either positive or negative. Secondly, social support may encourage proactive coping

behaviours during times of stress (Holt-Lunstad & Uchino, 2015). In the absence of stress, social support may also enhance factors that promote health such as self-esteem and sense of connection by increasing feelings that one is cared for by others (Thoits, 2011). The role of social support in stress prevention may explain why ‘perceived’ social support has been consistently associated with improved health outcome, including lower mortality rates, compared to the more variable effect of ‘received’ support (Uchino, 2009).

### **Who provides social support?**

Thoits (2011) distinguishes between two groups who provide social support functions – ‘*significant others*’ who have not experienced the stressor and ‘*similar others*’, i.e., those who have had prior experience with the stressor. Experientially based support provided by ‘similar others’ conveys empathetic understanding and provides a safe space in which individuals can vent their feelings and have them validated (Thoits, 2011). Support from ‘*similar others*’ is more likely to involve re-appraisal of a stressor, whereas that provided by ‘*significant others*’ is more likely to be instrumental support such as financial or practical assistance. The concept of peer support as described by Dennis (2003a) relates to support provided by ‘similar others’ and is grounded in the peer’s personal experience. The peers participating in the RUBY trial had all breastfed for at least six months, and while their personal experience of breastfeeding support varied, all had navigated the transition to motherhood and early months of breastfeeding.

### **Application to this thesis**

Maternal social support has an important impact on breastfeeding continuation and is a modifiable factor that may be influenced by interventions increasing formal or informal support (Raj & Plichta, 1998; Vari et al., 2000). Higher levels of social support are associated with increased levels of breastfeeding self-efficacy which may in turn support breastfeeding continuation (Dennis & Faux, 1999; Maleki-Saghooni et al., 2020). Social support may arise from the woman’s ‘primary’ social group (e.g., family member, close friends) and such support tends to be enduring. In contrast, secondary sources of

support tend to be more formal and less personal (e.g., from work colleagues) (Thoits, 2011). The concept of peer support is embedded within the 'social relationship' construct and emerges through 'created social networks' (Dennis, 2003a). Created social networks perform functions which align to those of social support, such as emotional, information, appraisal (Dennis et al., 2002) and instrumental support (Gale, Kenyon, MacArthur, Jolly, & Hope, 2018).

## EXPERIENTIAL KNOWLEDGE

Experiential knowledge is an underpinning theory of peer support interventions (Salzer, 2002; in Solomon, 2004), with a fundamental attribute of a peer supporter being the experiential knowledge they possess of a specific phenomenon (Dennis, 2003a). The lived experience of a phenomena is used to create emotional connections, and provides the ability to share pragmatic insights, and this has been one of the peer support's strongest mechanisms of action (Watson, 2019). At an individual level, peer support aims to enhance the conditions necessary for mothers to continue breastfeeding. Part of this is social and emotional support but peer support also taps into the experiential knowledge of mothers who have breastfed and are willing to pass this knowledge on (Rossman, 2007). Doing so increases the exposure of mothers and infants to the benefits of breastfeeding and increases the wisdom of breastfeeding available at community level.

Originally derived from the 'self-help group' literature, the concept of 'experiential knowledge' was first distinguished from 'professional knowledge' by Borkman over 40 years ago (Borkman, 1976). Borkman (1976, p. 446) defined experiential knowledge as 'truth learned from personal experience with a phenomenon rather than truth acquired by discursive reasoning, observation, or reflection on information provided by others. The two key elements of experiential knowledge are the information gleaned from the experience itself and the person's attitude toward that information (Borkman, 1976). She differentiated between 'experiential knowledge' and 'experiential expertise', the latter of which she refers to as the 'competence or skill in handling or resolving a problem through the use of one's own experience' (Borkman, 1976, p. 447). The

important difference between these two concepts is that although individuals may experience a phenomenon, the degree to which they have the capacity to develop competence as a result of that experience varies. Thus, the two key elements of experiential knowledge are the information gleaned from the experience itself and the person's attitude toward that information (Borkman, 1976).

In comparison to professional knowledge, Borkman (1976) described experiential knowledge as pragmatic, orientated to the 'here-and-now' and holistically focused. Abel and Browner (1997, p. 315) suggest there are two types of experiential knowledge, 'embodied' and 'empathetic'. 'Embodied' knowledge refers to 'knowledge derived from women's experiences with and perceptions of their bodies, for example as they change throughout the course of pregnancy, or knowledge derived from their previous pregnancies', whereas 'empathetic knowledge' is derived from intimate knowledge of the experiences of others e.g., supporting a close relative.

Recent advances have been made to the concepts of 'experiential knowledge' and 'experiential expertise' in relation to contemporary healthcare including a distinction between the concepts of 'peer support' and 'experiential expertise' (Castro, Van Regenmortel, Sermeus, & Vanhaecht, 2019). Although both are based on 'experiential knowledge', Castro (2019) asserts that 'peer support' operates at an individual level and is generally limited to sharing personal experiences. In contrast 'experiential expertise' has the potential to operate at multiple ecological levels from the micro level or direct care, through the meso level (organisation of care) to the macro (policy level) and meta level of research and education and may exceed the boundaries of personal experiences (Castro et al., 2019).

### **Application to this thesis**

Borkman's (1976) original concept of 'experiential expertise' is well aligned to the role undertaken by peer supporters as it recognises the peers' embodied experience of breastfeeding and their capacity to overcome associated challenges. Peers have experience of a common phenomenon and have usually undertaken training to enable

sharing of their experiences in an appropriate manner. Fundamentally, breastfeeding peers share the tacit knowledge derived from their own breastfeeding experience with a new mother who may be struggling in the early weeks of breastfeeding. It is generally accepted that breastfeeding peers will undergo training to prepare them for the role (Jolly, Ingram, Khan, et al., 2012). Key functions of peer training are to explore participants' attitudes to infant feeding, to enhance communication skills (active listening, re-appraisal of concerns), and to discuss commonly encountered breastfeeding issues. In the RUBY RCT, training focused on all these aspects and encouraged participants to reflect on their own views of infant feeding. The RUBY training did not focus extensively on breastfeeding content. Training aimed to ensure peers could provide a supportive environment and their experiential insights to help new mothers to untangle the complexities of breastfeeding within their own unique contexts.

## ASSET AND STRENGTH-BASED APPROACHES TO BREASTFEEDING SUPPORT

Asset and strength-based approaches to health promotion aim to identify and enhance health generating and protective behaviours at community and individual levels (McCashen, 2010; Morgan & Ziglio, 2007). These approaches complement 'deficit models' which focus on problems and risk, and with higher levels of dependence on services (Morgan & Ziglio, 2007). 'Health assets' are defined as

*...any factor (or resource), which enhances the ability of individuals, groups, communities, populations, social systems and /or institutions to maintain and sustain health and well-being and to help to reduce health inequities. These assets can operate at the level of the individual, group, community, and /or population as protective (or promoting) factors to buffer against life's stresses (Morgan & Ziglio, 2007, p. 18).*

The main processes through which health assets are mobilised are through connection with existing assets such as people and organisations, by raising awareness of under-used assets, and by supporting an individual to become assets within their communities, such as through peer support programs (Cassetti, Powell, Barnes, & Sanders, 2019). Three frameworks underpinning asset-based approaches to health promotion have been

identified (Cassetti et al., 2019); *salutogenesis* (Antonovsky, 1979), the *asset-based community development framework* (Kretzmann, McKnight, & Northwestern University: Center for Urban Affairs Policy Research, 1993) and the *asset model* (Morgan & Ziglio, 2007). Salutogenesis is the most relevant to this thesis and is discussed in more detail. The *asset-based community development framework* and the *asset model* are focused on a community level, whereas *salutogenesis* enables consideration of individual level factors. There is an inter-relationship between these models, for example the asset model proposed by Morgan and Ziglio (2007) draws explicitly on salutogenic concepts. More recently, Perez-Wilson et al., (2020) propose a synergistic model comprising both salutogenesis and the health assets model. They argue that ‘salutogenesis provides a useful framework to reinforce positive approaches to public health, and it can be seen as a theoretical construct that is supported by an asset approach, which is a practical method of implementation’ (Pérez-Wilson et al., 2020, p.7).

## SALUTOGENESIS

Salutogenesis is an ‘asset-based’ approach to health promotion and was first proposed by Antonovsky in 1979. Salutogenesis considers an individual’s health status as a dynamic point along a continuum between ‘ease’ and ‘dis-ease’ (Antonovsky, 1979) rather than a dichotomous state of health or illness. A sociologist, Antonovsky’s interest arose following a study of Israeli women who survived internment in Nazi concentration camps during the Holocaust. Antonovsky observed that some women adapted better than others to life after the camps. Thus, it was the salutogenic question:

*...not why does one become sick, but how does one move toward the health pole on the ease–dis-ease continuum...that constituted the major philosophical change in thought, from the traditional pathogenic orientation to the salutogenic view of the mystery of health (Antonovsky & Sagy, 2017, p. 16).*

In contrast to the prevailing pathogenic approach to health, with its focus on risks to health, Antonovsky was interested in the factors strengthening an individual’s position at the ‘ease’ end of the continuum despite their exposure to threats to health, which he considered ubiquitous. It is important to note that salutogenesis was not intended to

supplant the prevailing pathogenic paradigm, but to offer a supplementary view that expanded focus beyond risk and disease causation (Antonovsky, 1996; Mittelmark & Bauer, 2017). As such it has relevance to, and has been embraced by, in health promotion researchers (Mittelmark & Bauer, 2017).

There has been a call for maternity research, practice, and policy to be considered within a well-being framework rather than maintaining a pathogenic focus (Downe & McCourt, 2019; Smith et al., 2014). To date, pathogenic outcomes have dominated maternity research. A systematic review of systematic reviews of intrapartum interventions, identified salutogenically-focused outcomes in only a small proportion of the 102 included systematic reviews (Smith et al., 2014). A salutogenically-focused outcome was defined as 'reflecting positive health and well-being rather than illness or adverse event prevention or avoidance' (Smith et al., 2014, p. 152). A total of 16 categories of salutogenically-focused outcomes were identified, with the two most cited being 'maternal satisfaction' and 'breastfeeding (positive outcomes e.g., initiation, duration, success)'. In contrast, 49 non-salutogenically focused outcome categories were identified; the two most frequent being related to infant morbidity or maternal blood loss. Based on these findings, it appears that intrapartum care is more frequently assessed against pathogenic outcomes, rather than outcomes that support well-being and positive health outcomes (Smith et al., 2014).

Adopting a more salutogenically orientated approach to maternity research focuses attention beyond the prevention of adverse outcomes and reduction of risk, to incorporate measures of maternal well-being, such as maternal parenting confidence and satisfaction with care (Smith et al., 2014). Decisions made regarding infant feeding have a salutary impact on maternal and infant health and these decisions may be positively influence by peer support (Dennis, 2003b). Two core constructs within the salutogenic framework are particularly relevant to the way in which peers may influence maternal infant feeding decisions. Firstly, by increasing the new mother's *sense of coherence*, or capacity to cope with breastfeeding challenges and secondly, by supporting the mother to recognise and mobilise *generalised resistance resources* available to help her cope with challenges.

## Sense of coherence

In response to the question 'what are the origins of health', Antonovsky's answer was the *sense of coherence* (Mittelmark & Bauer, 2017, p. 10). The sense of coherence is the central construct of the salutogenesis model and is defined as:

*... a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected (Antonovsky, 1979, p. 123).*

The sense of coherence is comprised of three elements; *comprehensibility* (the individual's ability to understand or predict the challenge), *manageability* (the extent to which resources are available to manage challenges) and *meaningfulness* (it is worth expending effort to overcome the challenge). Movement toward either end of the ease/dis-ease continuum is determined by an individual's inherent sense of coherence and ability to mobilise resources.

Thomson and Dykes (Thomson & Dykes, 2011) used the sense of coherence and its three constructs comprehensibility, manageability, and meaningfulness, as an interpretive lens to explore data from qualitative interviews exploring women's experience of infant feeding. Emerging themes were grouped around these three constructs. This research highlights aspects of a mother's experience that may be targeted by breastfeeding peer support such as providing consistent support and guidance to increase the mother's capacity to overcome any breastfeeding challenges she may face. Increasing the capacity for the woman to manage challenges by helping her to identify her personal support systems, and referring her to quality sources of assistance, are important aspects of peer support. In addition, peers are encouraged to establish what is personally meaningful to a woman in relation to infant feeding, including her personal breastfeeding goals, and the influence of external resources such as social supports on feeding decisions (Thomson & Dykes, 2011).



## **Generalised and specific resistance resources**

A salutogenic approach is concerned with how individuals deploy *generalised resistance resources* to cope with psychological, physical, and biochemical stressors (Antonovsky & Sagy, 1986). Generalised resistance resources include resources such as finances, knowledge and intelligence, sense of identity, flexibility in the face of stress, social support, commitment to cultural roots, and personal preventive health orientation. Generalised resistance resources can be considered on a continuum, and if absent, may become a stressor or generalised resistance resources deficit. It has been proposed that 'via the sense of coherence, generalized resistance resources enable one to recognise, pick up and use specific resistance resources in the social and physical environment in ways that keep tension from turning into debilitating stress' (Mittelmark, Bull, Daniel, & Urke, 2017, p. 73 - 74). It is proposed that the more generalised resistance resources a person is aware of and consciously able to employ, the higher the sense of coherence which in turn increases their capacity to mobilise further generalised resistance resources (Antonovsky, 1979; Vinje, Langeland, & Bull, 2017).

## **Application to this thesis**

The peer support intervention in this study aimed to promote breastfeeding by supporting women to overcome challenges during the first six months of their infant's life. Hoddinott et al., (2012) suggest physical, emotional or social stressors encountered during the first six months of breastfeeding may trigger 'pivot points' during which a change to infant feeding practices offers a positive alternative. These pivot points may be intense and lead to rapid transition from breastfeeding to formula feeding or may be more prolonged with gradual consideration of infant feeding options (Hoddinott, Craig, Britten, et al., 2012). Regarding breastfeeding continuation, peer support provided by a woman who has successfully breastfed may help a mother struggling with breastfeeding challenges to mobilise her own resources and provide specific resources, enabling her to maintain her desired position along the infant feeding continuum.

## THE FUNCTIONAL APPROACH TO VOLUNTEER MOTIVATION

Health care models implementing volunteer peer support programs are dependent on their capacity to recruit volunteers. It is important to understand why peer volunteers are interested in the volunteering as it helps program planners to develop effective recruitment strategies. The functional approach to volunteer motivation provided a useful framework to examine the motivations of volunteers who offered their time to support women (Clary et al., 1998). It is based on the broader psychological functionalist approach that argues people may perform the same actions but with different motivations, or to meet different individual needs (Clary et al., 1998). As originally stated by Clary et al.,

*the core propositions of a functional analysis of volunteerism are that acts of volunteerism that appear to be quite similar on the surface, may reflect markedly different underlying motivational process and that the functions served by volunteerism manifest themselves in the unfolding dynamics of this form of helpfulness, influencing critical events associated with the initiation and maintenance of voluntary helping behaviour. (Clary et al., 1998, p. 1517)*

The functional approach operates at an individual level and proposes that volunteers are motivated by factors serving six motivational functions (Clary, Snyder, & Ridge, 1992; Clary et al., 1998):

- *Values:* People volunteer to express values they consider important and are altruistic or related to an area of humanitarian concern;
- *Understanding:* People volunteer to open themselves up to new learning, experiences and to develop new skills;
- *Social:* People volunteer to fulfill a need for social connection or social approval;
- *Career:* People volunteer to gain benefits that may advance their work prospects;
- *Protective:* People volunteer to protect themselves from their own negative feelings; and
- *Enhancement:* People volunteer for positive self enhancement.

The Volunteer Functions Inventory (VFI) is a 30-item validated questionnaire developed to assess the six primary functions served by volunteering (Stukas, Worth, Clary, & Snyder, 2009). The VFI has been used in diverse areas of volunteer research including health, sport, education, leisure, and environmental contexts (Chacón, Gutierrez, Sauto, Vecina, & Pérez, 2017). The 'values' function, which relates to humanitarian or altruistic values, has been reported to be the most significant to participants in a number of studies (Chacón et al., 2017; Clary et al., 1998; Finkelstein, 2008; Stukas, Worth, Clary, & Snyder, 2009). In addition, volunteering for a longer duration has been associated with fulfillment of 'values' and 'understanding' functions (Finkelstein, 2008). Chacon et. al., (2017) undertook a systematic review of 48 individual studies to test the psychometric properties of the VFI. Some studies included more than one sample, which resulted in 67 instances where the VFI was applied. Results indicated that the mean score for the 'values' factor was higher overall. The 'career' and 'enhancement' factors were the lowest, although volunteers under 40 years of age were likely to score higher on the 'career' and 'understanding' scales compared to older volunteers.

In addition to quantitative applications, health-related studies have used the broader functional approach to volunteering as a theoretical lens in qualitative studies (Hopper & Skirton, 2016; Same, McBride, Liddelow, Mullan, & Harris, 2020). Hopper and Skirton (2016) interviewed clinical staff and peer supporters whose roles included giving breastfeeding support in a hospital environment. The study identified three main factors motivating the peer supporters including 'helping people', 'social contact' and 'career progression' (Hopper & Skirton, 2016).

Although the VFI is designed to categorise the motivation of volunteers according to six functions, volunteers may have multiple motivations for undertaking a role (Stukas, Daly, & Cowling, 2005). The functional theory of volunteering suggests that when a volunteer role allows an individual to meet their personal goals and motives, their satisfaction, and thus retention may be enhanced (Stukas et al., 2009). Whilst recruitment messages may be most persuasive when aligned to the most important motivations identified amongst a group of volunteers (Clary et al., 1998), there is a risk of rapid attrition of volunteers if their needs aren't met soon after commencement (Boezeman & Ellemers, 2013).

## Application to this thesis

The ability to recruit volunteers was a key consideration during the RUBY study. In the initial stages of the RCT it was unclear whether the role would attract adequate numbers of suitable volunteers. It was therefore considered important to explore why women were interested in the peer support role to develop effective recruitment strategies. The functional approach to volunteering motivation was used to inform quantitative (see **Chapter 8**) and qualitative (see **Chapter 9**) data collection and data interpretation. Salient items from the VFI were selected and, in some cases, reworded and included in the RUBY Volunteers Experience survey (further detail is provided in **Chapter 8**). The six motivational functions were used as an interpretive lens in the analysis of focus group transcripts, and this is further detailed in **Chapter 9**.

## SUMMARY

This thesis has drawn on four theoretical approaches to address the overall aims. These theories operate at different points in the peer relationship and have been pragmatically applied to assist data collection and interpretation, rather than subjected to empirical testing. The overall theoretical approach used in this thesis is summarised in **Table 1**.

**Table 1:** Framework for intervention delivery

Aspect of intervention implementation	Relevant theory/ concept	Examples
<b>Recruiting &amp; training peers</b>	Functional approach to volunteering	To understand the motivations for peer participation Recruitment messages align with peer motivations
	Experiential knowledge	Value experiential breastfeeding knowledge and pass forward Communication skills and knowledge of breastfeeding resources Identify and reflect on personal views regarding infant feeding Identify strengths in overcoming breastfeeding challenges
<b>Relationship between peers and mothers</b>	Social support	Developing trust and rapport Acknowledge new mother's personal breastfeeding goals Stress buffering through provision of informational, emotional and appraisal support Positive appraisal of mother's efforts to maintain breastfeeding
	Salutogenesis	Breastfeeding presented as normal method of infant feeding Help to identify personal resources to overcome challenges Referral to supportive resources
<b>Potential positive outcomes for mothers</b>	Social support	Increased self-esteem by achieving personal goals
	Salutogenesis	Mother able to adapt and overcome breastfeeding challenges Mother reframes and/or normalise challenges
<b>Positive outcomes for community</b>	Salutogenesis	Increase breastfeeding to six months of age Expansion of community knowledge of breastfeeding Increased recognition of breastfeeding as a social norm

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### ***Forthcoming chapter***

In the next chapter, the methodological approach (**Chapter 6**) for the study is described. This was a pragmatic study undertaken using mixed methods. These methods are described, and the candidate's reflexive account concludes the chapter.

## Chapter 6 Methodology

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This chapter describes the philosophical approach and methodology used in this thesis. Further details of the research methods used in each component will be presented in subsequent chapters (Chapters 7, 8 and 9). The studies detailed in this thesis were designed to answer important questions about the implementation of the proactive telephone peer support intervention in the RUBY RCT. The overarching aim of this thesis was to explore and understand key factors in the implementation of the peer support intervention used in the RUBY randomised controlled trial (RCT), to inform future upscaling and sustainability of proactive telephone breastfeeding peer support models. The research questions were:

- What factors contributed to successful implementation of the RUBY intervention?
- What are the characteristics of the RUBY volunteers and how can they inform future peer support programs?
- What were the motivations and experiences of volunteers providing the intervention?

A map of the relationship between the research questions, data collection methods and publications are presented in **Table 2**.

**Table 2:** Schematic map of methods of data collection, data sources and publications in relation to the research aims/ questions

Overarching research question			
What were the key factors in the implementation of the peer support intervention used in the RUBY randomised controlled trial, that can inform future upscaling and sustainability of proactive telephone breastfeeding peer support models?			
Research questions	Chapter	Methods	Publications related to the research questions
<b>What factors contributed to successful implementation of the RUBY intervention?</b>  <b>What are characteristics of the RUBY volunteers?</b>	7	Process evaluation: Quantitative analysis of Call Log data; Qualitative content analysis of open-ended data	<b>Grimes HA</b> , McLachlan HL., Forster DA, McLardie-Hore F, Mortensen, K., Shafiei T (2021). Implementing a successful proactive telephone breastfeeding peer support intervention: volunteer recruitment, training, and intervention delivery in the RUBY randomised controlled trial. <i>International Breastfeeding Journal</i> .
<b>What were the motivations &amp; volunteers' experiences of providing the intervention?</b>	8	Quantitative online survey with qualitative content analysis of open-ended responses	<b>Grimes, HA.</b> , Shafiei, T., McLachlan, HL., & Forster, DA. (2020). Volunteers' experiences of providing telephone-based breast-feeding peer support in the RUBY randomised controlled trial. <i>Public Health Nutrition</i> , 1-11. <a href="https://dio.org/10.1017/S136898002000124X">https://dio.org/10.1017/S136898002000124X</a>
	9	Qualitative descriptive design using semi-structured focus group interviews	<b>Grimes HA</b> , Forster DA, Shafiei T, Amir LH, McLardie-Hore F, McLachlan HL. (2020). Breastfeeding peer support by telephone in the RUBY randomised controlled trial: A qualitative exploration of volunteers' experiences. <i>PLoS One</i> . 15(8):e0237190. <a href="https://dio.org/10.1371/journal.pone.0237190">https://dio.org/10.1371/journal.pone.0237190</a> .



## OVERVIEW OF METHODOLOGY

A mixed methods design was used to address the aims of this thesis as it provided the flexibility to address the research questions without being inhibited by complying with the constructs of a single research paradigm (Creswell & Plano Clark, 2007). Initially, this study was conceived using a quantitative design. However, it became evident during interaction with groups of volunteers at the training session and planned social 'get-togethers' that their conversations offered rich insights into their motivation to participate and their experience as a RUBY peer supporter. Continuing with a purely quantitative design would have limited the candidate's access to this potentially rich data. The candidate had observed the peer's interactions in a group context so a qualitative exploration that replicated this was deemed the most appropriate. Thus, to answer the research questions with additional depth, a mixed- methods study was designed.

### **Paradigmatic approach**

The term paradigm was popularised by the work of Thomas Kuhn in the second half of the twentieth century (Morgan, 2007). The term has had multiple interpretations and although it is usually used to describe a shared set of beliefs about how knowledge is generated, the level of generality of these beliefs may vary (Morgan, 2007). For example, a 'paradigm may be understood as 'a worldview' encompassing all ways of thinking and experiencing the world, or as a 'model', that provides solutions to specific problems (Morgan, 2007). A paradigm may also be viewed as '*an epistemological stance*' concentrating on issues related to the philosophy of knowledge and knowing (Morgan, 2007). Prominent research approaches such as 'positivism', 'realism' and 'constructivism' are distinct systems of constructing knowledge and exemplify paradigms as 'an epistemological stance'.

The strongly held belief that these paradigms are rooted in 'epistemological and ontological' commitments that made them incompatible with each other (Bryman, 2012, p. 629) was prominent during the so-called 'paradigm debate' (Creswell and Plano Clark,

2011) or the 'paradigm wars' ((Biesta, 2010; Oakley, 1999) of the 1970s. During the 1980s the view of qualitative and quantitative paradigms being incommensurable was supplanted by a growing acceptance that these approaches may not necessarily be mutually exclusive (Bryman, 2012). Quantitative and qualitative paradigms are seen as two ends of a continuum with 'mixed methods' positioned toward the middle of the continuum (Creswell, 2015; Johnson & Onwuegbuzie, 2004).

Paradigms widely used in research include postpositivism, constructivism, transformative and pragmatism (Creswell & Creswell, 2017). Each paradigm encompasses a philosophical understanding of four main elements: axiology (the nature of ethics and what is valued), ontology (the nature of reality), epistemology (assumptions about how we know the world and relationship between the 'knower' and what is 'known') and methodology (shared understanding of the tools used to generate knowledge about the world) (Biddle & Schafft, 2014). The three paradigms employed at various stages of this thesis are postpositivism, constructionism and pragmatism.

Postpositivism embraces a view that 'truth' is 'probabilistic' and gradually acquired, rather than 'absolute' (Creswell & Creswell, 2017; Leedy & Ormrod, 2015).

Postpositivism aligns with the 'scientific' method and quantitative approaches that generate data based on observation and measurement. In contrast, 'constructivism' is more aligned to qualitative approaches and the belief that 'human beings construct meaning as they engage with the world they are interpreting' and make sense of it based on influences such as history, social experiences, and culture (Creswell & Creswell, 2017, p. 9). Pragmatism is an approach widely associated with mixed methods research (Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2003). The pragmatic stance focuses on finding solutions by employing methods that are appropriate to the problem at hand (Greene & Hall, 2010) rather than adhering to methods dictated by a single paradigm.

## PRAGMATISM

*'Pragmatic research is driven by anticipated consequences. Pragmatic choices about what to research and how to go about are conditioned by where we want to go in the broadest of senses.'* (Cherryholmes, 1992, p. 13)

The research questions that formed the basis of this research warranted an open and flexible design that used research methods without the constraint of adhering to dictates of either the quantitative or qualitative paradigm. A pragmatic approach was considered the most appropriate. In everyday parlance, to be 'pragmatic' is defined as *'dealing with matters in accordance with practical rather than theoretical considerations or general principles; aiming at what is achievable rather than ideal; matter-of-fact, practical, down-to-earth'*. (Oxford English Dictionary, n.d)

From a philosophical perspective, *pragmatism* emerged from the work of philosopher Charles Pierce in the late nineteenth century and was further developed by William James and John Dewey in the early twentieth century (Talisie & Aikin, 2008). As a relatively new philosophical phenomenon, pragmatism remains somewhat imprecisely defined (Cherryholmes, 1992; Talisie & Aikin, 2008). Broadly, pragmatists view truth, meaning and knowledge as tentative, and reject the dualism of traditional research paradigms; consequently, flexible approaches that are outcome focused are legitimised (Cherryholmes, 1992; Creswell & Creswell, 2017). A central premise of pragmatism is that epistemological dictates associated with a single paradigm are not privileged over the methodological aims or methods employed to address a research question (Morgan, 2007). A pragmatic approach focuses on what might work to address a problem and will use a range of qualitative and quantitative method to achieve the desired outcomes (Creswell & Creswell, 2017).

### **The logic of pragmatic mixed methods**

Mixed methods research may be theoretically underpinned by inductive, deductive and/or abductive reasoning (Morse & Niehaus, 2009). Deductive reasoning is an approach that starts with a general premise (e.g., theory, conceptual framework) and

takes the argument to the particular (e.g., specific observations or data), and draws conclusions that are necessarily true, if the original premise is correct. In contrast, inductive reasoning is an interpretivist approach that moves from the specific (e.g., observations or data) to a general conclusion, which is probably, unlike deductive reasoning, not necessarily true (Jirojwong & Welch, 2014). A third mode of reasoning is abduction which is defined as 'the process of working back from an observed consequence to a probable antecedent or cause' (Denzin, 1978 in... (Shank, 1998, p. 847). All patterns of reasoning may be used in a mixed methods study (Teddle & Tashakkori, 2009). For example, abduction can be used to explore the data and identify patterns that suggest a plausible hypothesis, deductive reasoning can be used to further analyse the data using the hypothesis and inductive reasoning may be used to verify findings (Teddle & Tashakkori, 2009).

In this thesis, the theoretical approaches are predominantly, but not exclusively, deductive for quantitative Components 1 and 2, and inductive for qualitative Component 3. The point of convergence for the studies bound by this thesis is in the 'discussion' (**Chapter 10**). The discussion will take the deductive findings of the quantitative studies and combine them with the inductive findings of the qualitative studies in a systematic and iterative process (Morgan, 2007).

## THE RESEARCH APPROACH: MIXED METHODS RESEARCH

Mixed methods studies have become increasingly popular in health science research to address complex problems or where there is a paucity of research (Greenhalgh, Bidewell, Crisp, Lambros, & Warland, 2020; O'Cathain, Murphy, & Nicholl, 2007). Mixed methods can be viewed as a *methodology* that 'involves philosophical assumptions that guide the direction of the collection and analysis and the mixture of qualitative and quantitative approaches in many phases of the research process' and as a *method* that guides how a researcher 'gathers both quantitative (closed-ended) and qualitative (open-ended) data, integrates the two and then draws interpretations based on the combined strengths of both sets of data to understand research problems' (Creswell, 2015, p. 2).

The emergence of mixed methods as a legitimate approach to research disrupted the long held dichotomous view of research belonging to either qualitative or quantitative paradigms (Johnson & Onwuegbuzie, 2004; Niglas, 2010). At the methodological level, there has been much debate about the appropriateness of combining quantitative and qualitative paradigms. A mixed methods methodology does not seek to undermine the legitimacy of paradigmatic traditions but rather, to harness each paradigm's strengths and minimise their weaknesses within a single research study (Johnson & Onwuegbuzie, 2004).

### **Research design: Convergent parallel mixed methods design**

The central premise of mixed methods research is that combining qualitative and quantitative data to address the study's aims provides a better understanding than using only one approach (Palinkas & Cooper, 2017). At a practical level, there are several reasons why mixed methods may be used. Green, Caracelli and Graham (1989) identified five justifications for combining quantitative and qualitative research following analysis of 57 empirical mixed methods evaluations:

1. 'Triangulation' seeks convergence, corroboration, correspondence of results from the different methods.
2. 'Complementarity' seeks elaboration, enhancement, illustration, clarification of the results from one method with the results from the other method.
3. 'Development' seeks to use the results from one method to help develop or inform the other method, where development is broadly construed to include sampling and implementation, as well as measurement decisions.
4. 'Initiation' seeks the discovery of paradox and contradiction, new perspectives of frameworks, the recasting of questions or results from one method with questions or results from the other method.
5. 'Expansion' seeks to extend the breadth and range of inquiry by using different methods for different inquiry components. (Greene et al., 1989, p. 259)

A more detailed and expansive list that identified 16 reasons for conducting mixed methods research was provided by Bryman (2012) following a content analysis of 232 mixed methods articles. Of the 16 reasons identified by Bryman, the three most common reasons for undertaking mixed methods research were:

- 'enhancement' or building upon quantitative/ qualitative findings;
- 'triangulation' which refers to the traditional view that quantitative and qualitative research might be combined to triangulate findings in order that they may be mutually corroborated; and
- 'completeness' which refers to the notion that the researcher can bring together a more comprehensive account of the area of enquiry in which he or she is interested if both quantitative and qualitative research are employed (Bryman, 2012, p. 634).

There are numerous mixed methods study designs, and they can be differentiated by a number of features, the most common being the sequencing of each components, the point of combining approaches and the dominance or priority given to each component (Creswell & Plano Clark, 2007; Morse, 2015; Tashakkori & Teddlie, 2010). Sequencing refers to the timing of qualitative and quantitative data collection. Data may be collected at the same time (concurrent/ parallel), or one after the other (sequential). While some researchers assert that quantitative and qualitative data may be equally emphasised (Creswell & Plano Clark, 2011) others contend that one dominates the other and is the 'theoretical thrust' that drives the study (Morse & Niehaus, 2009). A third approach is that described by Green as a *dialectical approach* that rejects forcing a choice between either quantitative, qualitative paradigms or a pragmatic approach and instead argues for the use of multiple perspectives and stances that generate insights that contribute to understanding of a phenomenon that is of practical consequence (Greene & Hall, 2010; Teddlie & Tashakkori, 2009). Three primary types of mixed methods designs are commonly described (Creswell & Creswell, 2017):

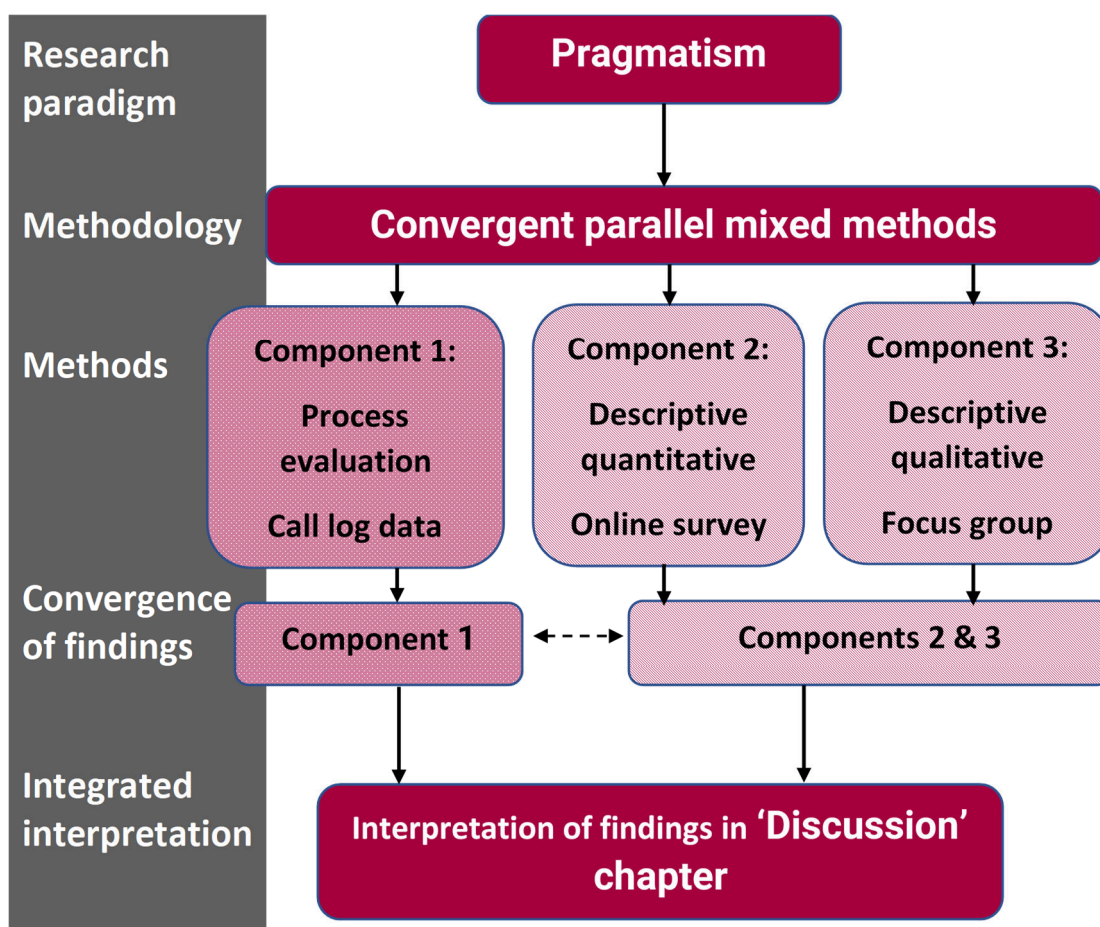
- Convergent parallel mixed methods
- Explanatory sequential mixed methods
- Exploratory sequential mixed methods

This study most closely aligns with a convergent parallel design. Both quantitative and qualitative data were collected simultaneously and analysed separately. The findings were published separately (see Chapters 7, 8 and 9). In this thesis, the findings from Components 2 and 3 are merged in the discussion with the purpose of comparing and confirming results. Quantitative methods are prioritised in this study with qualitative methods providing further confirmatory, divergent, or comparative insights.

### **Combining qualitative and quantitative findings**

The point at which data are combined, or the ‘point of interface’ may differ according to study design (Morse & Niehaus, 2009). Decisions regarding how and to what extent quantitative and qualitative data will be integrated can be made at a number of points; at the study design level when considering data collection methods, by linking qualitative and quantitative data analysis, and during the interpretation and reporting of results (Creswell, 2015; Fetters, Curry, & Creswell, 2013). A prevailing view is that mixed methods studies may offer more than the sum of their component parts, generating new insights that wouldn’t be apparent if findings were considered in isolation (Bryman, 2012; Creswell & Plano Clark, 2007; Zhang & Creswell, 2013). This is captured by Fetters and Molina-Azurins’ (2017, p. 294) who define ‘integration’ in mixed methods research as ‘the linking of qualitative and quantitative approaches and dimensions together to create a new whole or a more holistic understanding than achieved by either alone’. Not all data in a mixed methods study are necessarily inter-related to each other and some data may be completely independent (Bryman, 2012; Zhang & Creswell, 2013).

In this thesis, Component 1 addresses the research questions related to the process evaluation including intervention fidelity. The findings have been published and are presented in **Chapter 7**. Findings from Component 1 will generally be considered separately. Components 2 and 3 address similar research questions and explore similar concepts using different research methods. Data for each component were analysed independently, and findings have been published in separate papers. In this thesis, findings from Components 1, 2 and 3 are integrated in the **Chapter 10**.



**Figure 1:** Methodological approach used in this thesis

## ETHICS APPROVAL

The Royal Women's Hospital Research and Human Research Ethics Committees provided ethics approval for the RUBY RCT on 11<sup>th</sup> September 2012 (**Appendix D**). An amendment was sought from the Royal Women's Hospital Human Research Ethics Committee on 4<sup>th</sup> April 2014 to seek approval for the online survey of volunteers and conducting focus groups with volunteers. Approval was received on 23<sup>rd</sup> May 2014 subject to clarifying how many volunteers will be surveyed and interviewed. This information was provided and approval for the amendment was received on 17<sup>th</sup> June 2014 (**Appendix E**). Ethics approval was granted by the La Trobe University Human Ethics Committee on 15<sup>th</sup> October 2012 (**Appendix F**). An amendment was sought from the La Trobe University Human Ethics Committee on 17<sup>th</sup> April 2014 to seek approval for the online survey of



volunteers and conducting focus groups with volunteers. Approval was received on 30<sup>th</sup> April 2014 (**Appendix G**). Ethics approval was granted by Monash (formerly Southern Health) Health HREC on 16<sup>th</sup> August 2012 (**Appendix H**). Ethics approval was granted by Western Health Low Risk Research Ethics Panel on 31<sup>st</sup> August 2012 (**Appendix I**).

Consent from participants was implied by voluntary completion and completion of the online survey. Participants could elect to complete the survey anonymously or provide their first name and phone number to enable clarification of responses, if required. This information is not available to anyone outside the research project. All surveys are stored in the Qualtrics online platform and are password protected. Access to this data will be limited to researchers working on the project. All data will be stored for not less than five years. Ethical considerations are reported in further detail in each of the three publications (**Chapter 7, Chapter 8 and Chapter 9**).

## REFLEXIVITY – THE CANDIDATE’S VIEWPOINT

Reflexivity is an important strategy in the process of generating knowledge, particularly in the qualitative paradigm (Berger, 2013). It responds to issues that arise at multiple levels of research design ranging from broader philosophical understanding of epistemology and ontology (Teddlie & Tashakkori, 2009) through to the evaluation of how personal experiences may influence interpretation of data (Berger, 2013). Qualitative researchers using a constructivist paradigm or interpretivism believe reality is constructed and in its construction, the ‘knower and known are interactive, inseparable’ (Teddlie & Tashakkori, 2009, p. 86). Reflexivity aims to enhance the dependability of qualitative findings (Liamputtong, 2012). Personal reflexivity involves the researcher giving attention to and making explicit how *‘their role on the study and their personal background, culture, and experiences hold potential for shaping their interpretations, such as themes they advance and the meaning they ascribe to the data’* (Creswell, 2014, p. 186). In this thesis, the candidate’s viewpoint is presented in **Chapter 1**. The candidates personal and professional experiences of breastfeeding support are described, and the potential for personal experiences to influence

interpretation of data is acknowledged. Strategies taken to increase the reliability of findings are described in **Chapter 9**.

## CONCLUSION

This chapter has detailed the study design used in this thesis. A pragmatic philosophical approach informed a convergent parallel mixed methods design. This design enabled the use of quantitative and qualitative methods of data collection. The thesis is comprised of three components which were analysed separately, and in accordance with the dictates of the respective predominant paradigms. Integrated findings from Components 1, 2 and 3 are presented in the 'Discussion' (**Chapter 10**).

---

### ***Forthcoming chapters***

The following three chapters (Chapters 7, 8 and 9) address the aims of this thesis. Each chapter includes a publication with the addition of contextual and methodological information that will link each chapter and integrate it into the body of the thesis.

- |                  |                                                                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chapter 7</b> | Describes recruitment, training, and supervision of volunteers. In addition, details related to the content of the calls, including topics discussed, durations of calls and frequency of contacts are presented. |
| <b>Chapter 8</b> | Explores the experiences of the volunteers providing telephone-based breastfeeding peer support to new mothers within the RUBY RCT.                                                                               |
| <b>Chapter 9</b> | Provides a qualitative exploration of volunteers' experiences of providing breastfeeding peer support by telephone in the RUBY RCT.                                                                               |

## **Chapter 7   Implementing a successful proactive telephone breastfeeding peer support intervention: volunteer recruitment, training, and intervention delivery in the RUBY randomised controlled trial (Component 1)**

---

This chapter presents findings from Component 1 of the study and describes the process evaluation relevant to peer volunteer management and intervention delivery and fidelity.

This component used a mixed methods approach (see **Chapter 6**, The research approach: Mixed methods research) to explore salient aspects of the delivery of the RUBY intervention, with a focus on intervention fidelity and the recruitment, training, and support of those providing peer support. **Table 3** presents a summary of the aspects of the intervention delivery examined, data collection methods used, and location within this thesis. Following a discussion of the aims, rationale and data collection tools used in this component, a published manuscript is provided.

**Table 3:** Data collected for process evaluation

	Aspect of intervention evaluated	Data collection method	Chapter
<b>Implementation</b>	Recruitment of volunteers	Recruitment database	Chapter 7
	Number of volunteers attending training	Enrolment forms completed at training session	Chapter 3, 7
	Volunteer training – preparation for peer role	Self-report online questionnaire/ focus group interviews	Chapter 3, 7
	Volunteer training – additional needs	Self-report online questionnaire/ focus group interviews	Chapter 3, 7, 8, 9
	Training manual – usefulness to volunteers	Self-report online questionnaire/ focus group interviews	Chapter 7
	Volunteer experience of support provided by volunteer coordinator	Self-report online questionnaire/ focus group interviews	Chapter 8, 9
<b>Fidelity, dose, reach</b>	Adherence to call schedule	Call logs maintained by volunteers	Chapter 3, 7
	Number of calls each mother received	Call logs maintained by volunteers	Chapter 3, 7
	Duration of calls	Call logs maintained by volunteers	Chapter 7
	Number of mothers who received at least one call from volunteer	Call logs maintained by volunteers	Chapter 3, 7
<b>Mechanisms of impact</b>	Content of the calls	Call logs maintained by volunteers	Chapter 7
	Referrals provided to mothers by volunteers	Call logs maintained by volunteers	Chapter 7
<b>Contextual factors 'Who were the volunteers?'</b>	Demographic profile of volunteers	Recruitment database, volunteer enrolment forms completed at training session	Chapter 7
	Volunteer's personal experience of breastfeeding	Self-report online questionnaire	Chapter 7

## AIM OF COMPONENT 1

The aim of Component 1 is to describe factors related to the implementation of the RUBY peer support intervention. Lack of detail when reporting processes and monitoring fidelity of interventions, particularly those with wide heterogeneity, influences interpretation of study findings and is a limitation when reviewing evidence from peer support RCTs (Hoffmann et al., 2014; Jolly, Ingram, Khan, et al., 2012; McFadden et al., 2017).

## RESEARCH AIMS ADDRESSED IN COMPONENT 1

The aims of Component 1 are to explore:

- the recruitment, training and support of the peer volunteers;
- the main topics discussed during the calls and referrals suggested by volunteers;
- the volunteers' perceptions of the value of the calls to mothers; and
- to provide an overview of the role of the RUBY peer volunteer coordinator in recruiting, training, and supporting peers.

## RATIONALE FOR CHOICE OF DESIGN FOR COMPONENT 1

RCTs are important in evaluating whether one intervention works better than another or when compared to 'standard care', whereas process evaluations seek to answer questions related to 'how', 'why' and 'when' a public health intervention might work (Linnan & Steckler, 2002). An important aspect of reporting RCT findings is to provide sufficient details to enable replication of the intervention and understanding of how and what was delivered (Hoffmann et al., 2014; Schulz, Altman, Moher, & The Consort Group, 2010). Process evaluation is broadly defined as 'a study which aims to understand the functioning of an intervention, by explaining its *implementation*, *mechanisms of impact* and *contextual factors*' (Moore et al., 2015, p. 8). Undertaking process evaluation sheds light on factors that may impact the internal and external

validity of a study and increases confidence that findings are a direct result of the intervention (Cargo et al., 2018; Spillane et al., 2007).

## DATA COLLECTION TOOLS

This study used quantitative data collected from RUBY volunteer enrolment forms (volunteers' demographic data), training session data (completion of training and subsequent consent to participate) and data from Call Logs maintained by the volunteers for each mother supported.

### RUBY volunteer enrolment forms

Volunteers expressed interest in participation by either contacting the RUBY study phone number or by sending an email to the RUBY inbox. These were checked daily by either the project or volunteer coordinator. A screening form was commenced for each volunteer who expressed interest. At this point, their name and contact details were recorded in an Access database and each was ascribed a unique study number. Following screening by the volunteer coordinator, further demographic details and response to eligibility criteria screening questions were recorded (**Appendix J**). Eligible volunteers were invited to attend a RUBY training session.

During the training session, volunteers received a RUBY Volunteer Information manual (**Appendix K**) and a leaflet entitled Steps to Handling Difficult Situations (**Appendix L**). At the end of the training session, those volunteers who wished to pursue the role were asked to complete a volunteer enrolment form, and a privacy and confidentiality consent form (**Appendix M**). The volunteer coordinator entered all data collected in the enrolment forms into the RUBY volunteer database. Thus, all individuals who expressed interest in the volunteer role were recorded and identified in the database.

## **Training session data**

Records were maintained of those who attended each training session, the date and location of the session, and which members of the RUBY team attended. If a volunteer did not attend, they were followed up with a call or email from the volunteer coordinator to rebook. Any reasons for non-attendance provided by the volunteer were recorded in the database.

## **RUBY volunteer Call Logs**

Volunteers were instructed to record all contacts with the allocated mother, (including attempts) in the RUBY Call Log (**Appendix N**) that was designed for the study. The Call Logs were identified by the volunteer's name and study identifier number of the mother receiving support. The time/ date of unanswered calls was recorded, and any voice messages left for the mother noted. The Call Log consisted of a page to record unanswered calls and 16 copies of the template used for individual calls. It was anticipated that volunteers would make approximately 16 calls if they followed the call schedule. Each template included the number, date, and time of the call. The length of the call and who made the call was also noted. Closed-ended questions with tick box responses reported whether the volunteer felt the woman valued the call and why, whether the mother raised any concerns and what they related to, which topics were discussed and any referrals that were made. Space was available for the volunteer to make notes regarding follow-up and general comments. The final page of the Call Log asked the volunteer to record the date of the final contact with the mother and why support ceased. Responses to this question included 'The period of support ended as per the study protocol (6 months)', 'The mother discontinued breastfeeding', 'The mother requested no more calls', 'I was unable to contact the mother' 'I am no longer able to provide support' and 'Other reason (please provide details)'. Finally, the volunteers were asked if they would like to support another breastfeeding woman in the RUBY study and to provide overall feedback about their experience providing the support recorded in this Call Log. An additional section to record text messages was added following feedback from volunteers. Volunteers were asked to number and date the messages, to indicate who initiated the text and briefly describe the main purpose of the text.

## DATA COLLECTION PROCESSES

At the conclusion of the training session, volunteers were given a Call Log and instructions on how to complete it. If a volunteer requested an electronic call Log, an editable version was emailed to them. Additional Call Logs were provided when the volunteer agreed to undertake support of additional women. The volunteer was asked if they had any difficulties with using the Call Log during the first call by the volunteer coordinator and further explanation or instructions given as required. When the period of support finished, the volunteers were sent a pack that contained forms to claim reimbursement, a new Call Log if they agreed to support another mother, and a postage paid envelope to return the completed Call Log. A thank you letter was included, and it encouraged volunteers to return the Call Logs even if the period of support had been brief, and little data were recorded.

When a volunteer commenced a period of support, the Call Log associated with that period of support was assigned a unique numerical identity in an Access database (Call Log database). This ensured that the Call Log for each period of support was accounted for and enabled accurate calculation of return rate for the Call Logs. When the completed Call Logs were returned, this was noted in the database. All data including the volunteer and mother's study numbers were recorded in the database. No identifying data were entered into the database. All volunteers who had not returned their Call Logs were emailed reminders approximately two weeks after completion to encourage them to return the logs.

## CANDIDATE CONTRIBUTION TO PEER REVIEWED PAPER INCLUDED BELOW

I declare that I have made a substantial contribution to this paper, including contributing to the overall study design. I undertook data management and analysis, with the support of my supervision team and drafted the paper. The co-authors all contributed to the overall study design, intellectual input, and editing of the manuscript.

My contribution to this paper included data collection, preparing data for analysis, data analysis and interpretation. I also drafted the manuscript and contributed revisions.



## Citation

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The candidate's contribution to this manuscript was approximately 70%.	
Candidate:	Date: 27 <sup>th</sup> October 2021
Principal supervisor:	Date: 27 <sup>h</sup> October 2021

RESEARCH

Open Access



# Implementing a successful proactive telephone breastfeeding peer support intervention: volunteer recruitment, training, and intervention delivery in the RUBY randomised controlled trial

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## Abstract

**Background:** The RUBY randomised controlled trial demonstrated the benefit of proactive telephone peer support in promoting breastfeeding continuation in a setting with high breastfeeding initiation, where typically this is difficult to achieve. This paper describes the implementation and delivery of the peer support intervention with a focus on recruitment, training, and support of peer volunteers, and includes a description of the key components of the calls.

**Methods:** Data collection occurred between December 2012 and June 2016 in Melbourne, Australia. Volunteers completed enrolment forms at the training session and recorded data related to each call in a Call Log maintained for each mother supported. Data were summarised using descriptive statistics and responses to open-ended questions analysed using content analysis.

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**Results:** A total of 693 women expressed interest in the peer support role, with 246 completing training, that is, 95% of whom supported at least one mother. Each supported a mean of two mothers (range 1 to 11). Training session topics included respecting individual values, using positive language, confidence building, active listening, empathetic support, and normal baby behaviour. There were 518 periods of support where at least one call was made between a volunteer and a mother to whom she was allocated. Of the 518 periods of support, 359 Call Logs (69%) were returned. The 359 call logs recorded a total of 2398 calls between peers and mothers. Call length median duration was 12 min (range 1 to 111 min). Volunteers perceived the most valued aspects of the calls were the provision of 'general emotional support' (51%) and 'general information/discussion about breastfeeding' (44%). During the first call, mothers raised questions about 'nipple pain/ damage' (24%) and 'general breastfeeding information' (23%). At  $\geq 12$  weeks postpartum, issues raised related to 'normal infant behaviour' (22%), 'feed frequency' (16%), and 'general breastfeeding information' (15%). Volunteers referred women to other resources during 28% of calls, most commonly to the Australian Breastfeeding Association.

**Conclusions:** Our findings demonstrate that the RUBY trial was feasible and sustainable in terms of recruiting volunteers who were willing to participate in training and who proceeded to provide peer support. Call content was responsive to the evolving breastfeeding information needs of mothers and the provision of emotional support was perceived by volunteers to be important.

**Trial registration:** Australian New Zealand Clinical Trials Registry, ACTRN [12612001024831](https://www.anzctr.org.au/Trial/Registration/Trial.jsp?id=12612001024831).

**Keywords:** Peer support, Telephone support, Breastfeeding, Implementation

## Background

The Ringing up About Breastfeeding Early (RUBY) randomised controlled trial (RCT) conducted in Melbourne, Australia, demonstrated that in the context of a high rate of breastfeeding initiation, proactive telephone peer support provided by a peer volunteer in the first six months postpartum was an effective intervention for increasing breastfeeding maintenance [1]. In the RUBY study, significantly more infants of women assigned to proactive telephone peer support were receiving *any* breast milk at six months of age compared to women assigned to usual care [1]. High level quantitative outcomes such as those reported in the RUBY RCT make a contribution to the evidence for breastfeeding peer support interventions [2–4], and it is crucial to understand how interventions shown to improve outcomes were implemented, to ensure they can be replicated and sustained.

Lack of detail when reporting processes and monitoring fidelity of interventions influences interpretation of study findings [5]. This issue is particularly relevant when designing interventions that have wide heterogeneity, as is the case for peer support RCTs [4] and for RCTs that lie at the pragmatic end of the pragmatic-explanatory spectrum [6]. In relation to studies of breastfeeding peer support, there has been a call to provide details about delivery of the support, including who delivered it, how it was delivered, the intensity, and whether it was proactive or reactive [7] [4]. For example, despite 'experiential knowledge' being central to the concept of peer support [8], the personal infant feeding experience of peers is only occasionally reported [9, 10],

and the length of breastfeeding experience is frequently unspecified [11]. Thompson and Trickey [7] highlight the limitations in focusing only on outcomes from experimental breastfeeding peer support studies, without considering contextual factors and key points of variation between studies such as the characteristics and training of peers. Omission of details regarding intervention delivery has also been identified as a limitation when systematically reviewing evidence from peer support RCTs [3, 4].

The aim of this paper is to describe factors related to the implementation of the RUBY peer support intervention [12]. The four key components reported here are: i. key aspects of recruitment, training and support of the peer volunteers; ii. details regarding the key topic areas discussed during the calls as well as referrals suggested by volunteers; iii. Volunteers' perceptions of the value of the calls to mothers; and iv. details regarding the role of the peer volunteer coordinator. The views and experiences of the peers have been reported in separate publications [13, 14].

## Methods

### Study context - RUBY study overview

The detailed study protocol for the RUBY randomised controlled trial (RCT) is published elsewhere [12]. Briefly, RUBY was a two-arm RCT of a proactive telephone breastfeeding peer support intervention for women who were recruited from the postnatal units of three public hospitals in the state of Victoria, Australia ( $n = 1152$ ). Women were eligible for inclusion if they were first time mothers, admitted as public patients to

the postnatal units of the participating hospitals, were proficient in English and were intending to breastfeed. Women were randomly allocated to receive either usual care ( $n = 578$ ) or the peer support intervention ( $n = 574$ ). In this setting, 'usual care' comprised a hospital stay of up to 48 hours following vaginal birth and 72 hours following caesarean section. Following discharge, women could access hospital-based breastfeeding services including lactation consultants. Peer support was provided by volunteer women recruited from the community. Volunteers were guided by the RUBY call schedule. The volunteer made the first contact within four to six days of birth and followed up with a second call within three to four days of the first. Calls were then weekly for 12 weeks and then three to four weekly until the baby was six months of age. They were advised that the actual call frequency could also be responsive to the mothers' needs [12].

### **The peer volunteers**

Women were eligible to be peer volunteers if they had breastfed a baby for at least six months, were keen to support other mothers, and were not breastfeeding 'experts' or 'counsellors' [12]. In the early weeks of volunteer recruitment, several health professionals, including midwives, student midwives, nurses and general practitioners expressed interest in the peer support role. It was difficult to quantify the amount of breastfeeding education they had received in their professional roles, therefore, to ensure the RUBY peers possessed mainly experiential knowledge, health professionals or breastfeeding counsellors who had received more than eight hours of breastfeeding training were considered ineligible. After initial screening, volunteers were provided with an overview of the program requirements and invited to attend a RUBY volunteer training session. Further screening of volunteers was undertaken at the training session and focused on observing communication skills and English proficiency. These were considered core skills given volunteers would be delivering proactive telephone support. Further details of the training and support provided to peer volunteers is detailed in the Results.

### **Data collection**

Data related to the volunteers were collected from the time of their initial expression of interest in the role. At this point, their name and contact details were recorded in an Access database and each was ascribed a unique study number. Following screening by the volunteer coordinator, further demographic details and responses to eligibility criteria screening questions were recorded. At the conclusion of the training session, those volunteers who wished to pursue the role were asked to complete a

volunteer enrolment form, and a privacy and confidentiality consent form. Following the training session, the volunteer coordinator entered all volunteer data into the database.

Data related to each call were recorded by the volunteer in pre-coded Call Logs developed for the RUBY trial and maintained by volunteers for each woman supported. Hard copies of the Call Logs were provided to the volunteers. They could request an electronic version if preferred. Each Call Log included the date, time and duration of each call, who initiated the call, whether the volunteer felt the mother valued the call and the reason for this response. Topics discussed during the call, referrals to other services and information given to the women, including recommended fact sheets and websites were recorded.

All Call Logs were assigned a unique numerical identifier when the period of support commenced. When each Call Log was returned, all data were entered into a password secured Access database [15], identifiable only by the pre-assigned number. Email reminders were sent to volunteers who had not returned their Call Logs to encourage them to do so. If a Call Log was not returned, this was noted in the database. If a volunteer was not able to establish contact with a mother, this was also recorded in the Call Log database.

### **Data analysis**

Quantitative data were analysed using Stata Version 15 [16]. Frequencies, percentages, and means were used to describe the data. Responses to open-ended questions were analysed using simple content analysis [17].

### **Ethics**

Research ethics approval was obtained from La Trobe University (12–08), Royal Women's Hospital (12/25), Western Health (HREC/12.WH/107) and Monash Health (12251B). The RUBY trial was registered with the Australian and New Zealand Clinical Trials Registry prior to commencement (ACTRN12612001024831).

## **Results**

### **Peer recruitment and training**

The first volunteers were recruited on 21 December 2012, with the first training session date on 16 January 2013. Recruitment of participants commenced on 14 February 2013 and concluded on 15 December 2015. Recruitment of volunteers commenced with dissemination of hardcopy flyers advertising the study to Maternal and Child Health (MCH) centres. As the study progressed, this method was replaced with electronic flyers posted to Australian Breastfeeding Association (ABA) online platforms. The ABA is a non-profit, volunteer organisation and Australia's largest breastfeeding information

and support service. This was a successful strategy and each post resulted in a surge of interest from potential volunteers (Fig. 1). Volunteers either emailed or expressed interest in the role by contacting the volunteer coordinator by phone. They were screened for eligibility and their contact details recorded. Eligible women were then invited to attend a training session.

Over the course of the study, a total of 693 women expressed interest in volunteering for the RUBY study, and of the 307 (44%) who booked into a training session, 246 (80%) attended (Fig. 2). Of these, most volunteers ( $n = 233$ , 95%) were allocated a mother. We do not have complete data regarding reasons why women who expressed interest not taking the next step and booking into a training session as we often had no further contact beyond their initial expression of interest. For those for whom a reason was known, the most commonly cited reasons were illness or changed work commitments.

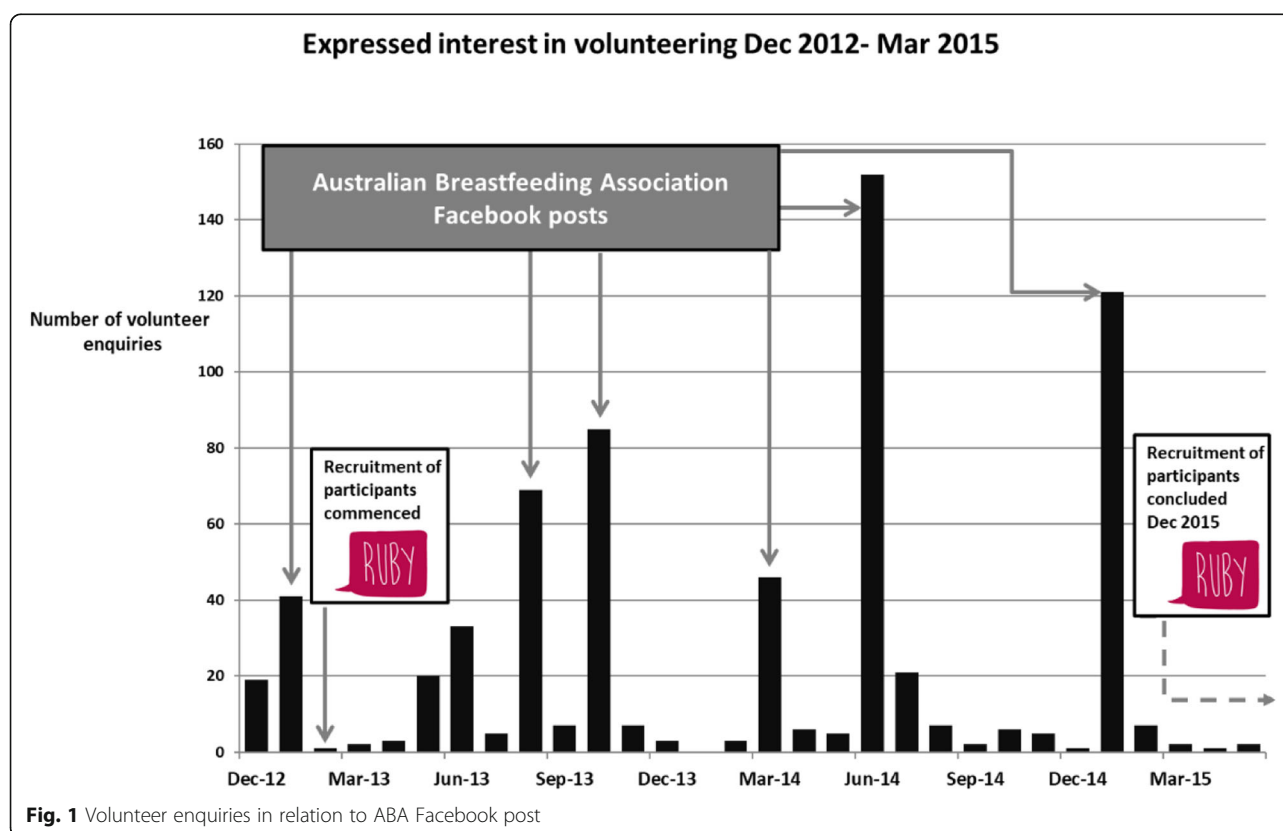
#### The training session

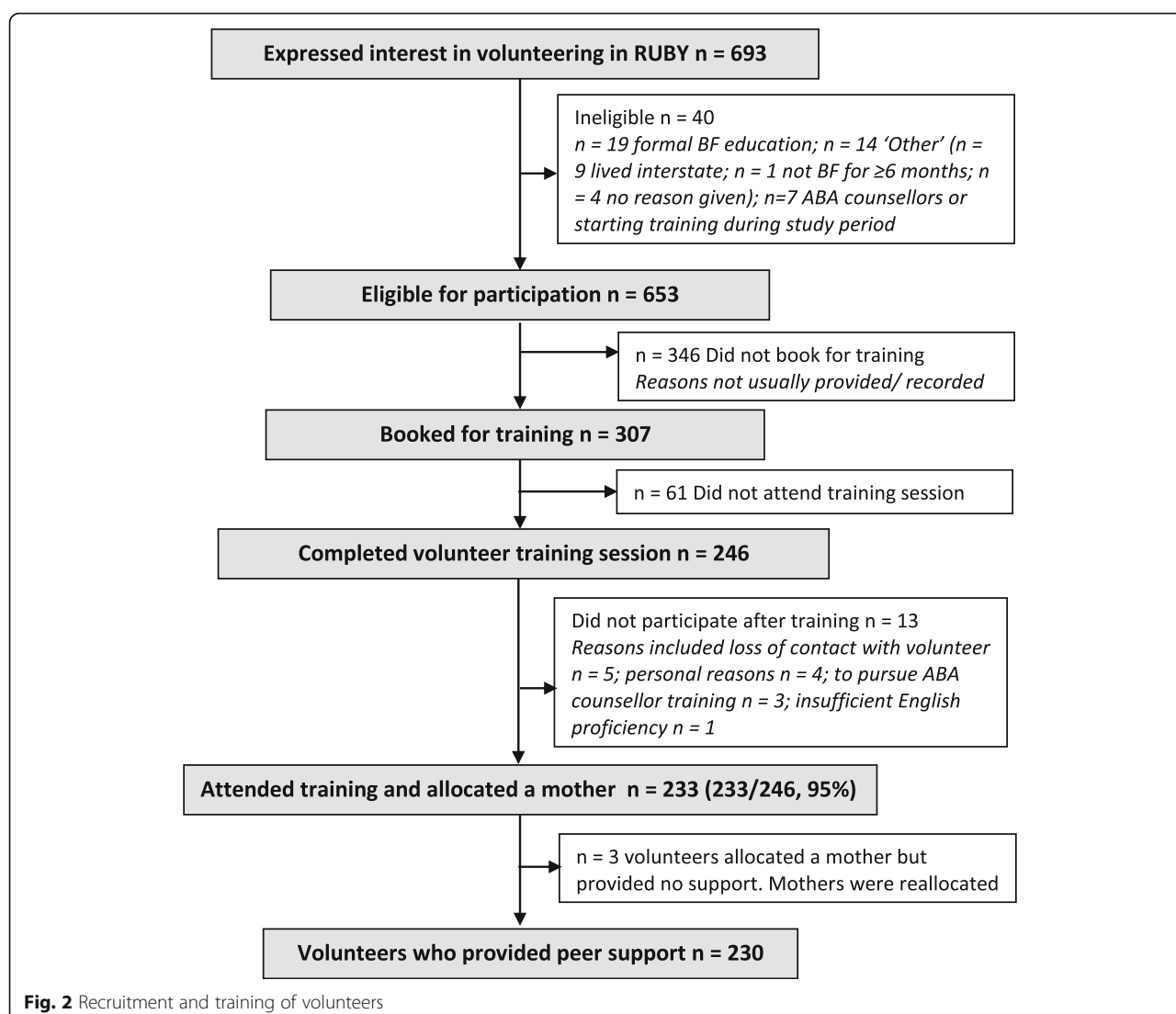
Peers attended a four-hour training session facilitated by an educator from the ABA and attended by one of the RUBY chief investigators, the project coordinator, and the peer volunteer coordinator. The training session was based on an existing ABA program and took place at a centrally located venue, close to public

transport and with convenient parking. Overall, 24 training sessions were conducted between January 2013 and May 2015, approximately one every four to 8 weeks.

Each session commenced with a discussion of the volunteers' personal experiences of breastfeeding and their motivation for participating in the study. The chief investigator presented the rationale and aims of the study, the sites involved, and a brief overview of what volunteering would entail including anticipated time commitment. The volunteer coordinator outlined the process of allocating mothers to volunteers and the support volunteers would receive during participation. At the end of the session, participants who were interested in being peer supporters completed an enrolment form and signed a Privacy and Confidentiality agreement.

Training session topics included respecting the beliefs and values of others, using positive language, confidence building, active listening and empathy, encouraging and supporting new mothers, and normal baby behaviour. Activities such as showing participants a series of photographs depicting various infant feeding scenarios were used to stimulate discussion of values and norms. The aim was to highlight pre-existing attitudes to feeding choices and to clarify personal values and judgements. The power of





**Fig. 2** Recruitment and training of volunteers

positive language to teach, build confidence and re-frame challenges was demonstrated and discussed using examples. Role-play scenarios were used to practice active listening and providing empathic responses. Information was presented about expected baby behaviour in relation to breastfeeding such as frequency of feeds, overcoming nipple pain, hunger cues, signs of adequate nutritional intake, reasons a baby might cry, and strategies for soothing a fussy baby. Problem solving and recognising the need for referral were explored, and links to resources providing quality breastfeeding information provided.

The procedure for how volunteers were allocated mothers for peer support has been described elsewhere [13]. Briefly, the volunteer coordinator received the new mother's contact details following recruitment and randomisation to the intervention group. The mother was

allocated to the 'next available' volunteer. Each mother was allocated one volunteer, and it was expected that the relationship would continue for the duration of the six-month period of support.

#### **The RUBY volunteer handbook**

A 32-page *RUBY Volunteer Mother's Information Manual* was developed collaboratively by the RUBY study team and the Australian Breastfeeding Association. It was also informed by the *Mother Helping Mothers with Postpartum Depression* peer volunteer training manual developed by Professor Cindy-Lee Dennis (Dennis, C.L., personal communication to Professor Della Forster - 18 December 2012). Volunteers received a printed copy of the manual when they attended the training session. The manual reiterated key messages from the training session and

listed appropriate sources of support to which they could refer mothers e.g. useful web pages and organisations such as the ABA and Maternal and Child Health services (Table 1).

### **Training and support provided to the volunteers**

Table 2 provides a summary of the support provided to volunteers. A volunteer coordinator (HG) who was an experienced midwife was appointed for the duration of the RUBY trial. The role included screening prospective volunteers, participating in training sessions, facilitating contact between peers and mothers, and responding to concerns raised by volunteers. The volunteer coordinator maintained regular contact with volunteers, commencing approximately seven days after allocation, to confirm contact with the mother had been made. The volunteer coordinator followed up with weekly and then monthly contacts either by phone or email and could be contacted by phone or email as required. In addition, the volunteer coordinator coordinated twice yearly 'social' events for volunteers to foster collaboration and support between volunteers.

When any period of support finished, the volunteer was sent a pack containing forms to claim reimbursement for calls, a new Call Log if the volunteer was available for allocation of mothers in the future, and a postage paid envelope for return of the completed Call Log. A thank you letter was included, encouraging volunteers to return the Call Logs even if the period of support was brief. Volunteers were offered \$50 AUD reimbursement for each completed period of support, subject to return of Call Logs.

### **Demographic characteristics of participants**

The demographic characteristics of all volunteers who supported at least one mother in the RUBY study are presented in Table 3. The mean age of volunteers was 33.9 years (standard deviation (SD) 5.0 years), and 82% were born in Australia (189/230). The majority had one child (52%) and the mean age of their youngest child at enrolment was 16.8 months. We asked volunteers to tell us the length of their longest experience of breastfeeding an individual child. The mean was 15.7 months and ranged between 6 and 60 months. A little over one third

**Table 1** Topics in the RUBY volunteer training manual

Section i	About the study <ul style="list-style-type: none"> <li>• Which organisations are involved in the study?</li> <li>• How many women will be involved?</li> </ul>
Section ii	Being a RUBY volunteer mother <ul style="list-style-type: none"> <li>• What will be expected of me?</li> <li>• Who can be a volunteer?</li> <li>• What is the role of the volunteer coordinator?</li> <li>• Who will I contact if I no longer want to be involved in the study?</li> <li>• What do I do when the period of support ends?</li> <li>• Who will support me?</li> </ul>
Section iii	Getting connected – staying connected: developing a relationship with the new mother <ul style="list-style-type: none"> <li>• Getting connected</li> <li>• Staying connected</li> <li>• How much time will it take to “stay connected”?</li> <li>• Developing a relationship with the mother</li> </ul>
Section iv	Skills and techniques to effective telephone support <ul style="list-style-type: none"> <li>• Learning about respecting other people’s values and cultural beliefs</li> <li>• Language – what are we really saying</li> <li>• Building confidence</li> <li>• Listening</li> <li>• Empathy is showing a mother you understand</li> <li>• Babies – what is normal</li> <li>• Breastfeeding and work</li> <li>• Practising being a volunteer breastfeeding supporter – role plays</li> </ul>
Section v	Resources and support services



**Table 2** Summary of training and support provided to the volunteers

Component	Description	When provided	Volunteers involved
<b>Face to face training sessions</b>	4-h training session facilitated by research team and ABA facilitator	Prior to commencing peer support role	Mandatory for all volunteers
<b>Training manual</b>	A hardcopy of the 32-page RUBY Volunteer Mother's Information Manual	Given to all volunteers during the training session	All eligible volunteers attending the training session
<b>Volunteer social events</b>	Informal morning-tea facilitated by volunteer coordinator and chief investigator	Approximately every six months for duration of study	Optional invitation to all volunteers providing peer support
<b>Regular phone/email contact from volunteer coordinator</b>	Phone or email contact with volunteers by volunteer coordinator during periods of support.	Within one week of allocation of a mother. Another call made a week later and then monthly contact during period of support.	All volunteers actively providing peer support
<b>Financial reimbursement</b>	\$50 AUD reimbursement for calls made during each period of support	At the conclusion of each period of support	All volunteers actively providing peer support could submit forms for reimbursement

of volunteers were members of the ABA at the time of enrolment (120/230).

### Intervention delivery

In this section we present findings related to delivery of the intervention as reported by volunteers in Call Logs. There were 574 new mothers allocated to the peer

support intervention group in the RUBY study and 579 'periods of support' (five mothers were allocated to a second volunteer when the first couldn't continue providing peer support). Calls for each 'period of support' were recorded in a Call Log assigned a unique identifier. Of the 579 periods of support, in 61 cases (11%), contact was never established [1], leaving 518 periods of support

**Table 3** Characteristics of peer supporters who supported at least one mother in the RUBY RCT<sup>a</sup>

Participant characteristic	n (n = 230)	%
Peer supporter's age in years (mean = 33.9)		
18–25 years	3	1.3
26–34 years	125	54.4
≥ 35 years	102	44.4
Number of children at time of enrolment (range 1–7)		
One child	120	52.2
Two children	85	37.2
More than two children	25	10.9
Number of children breastfed (, range 1–7)		
One child	127	55.2
Two children	79	34.3
More than two children	25	10.9
Youngest baby's age at time of enrolment (months) (range 3–312)	mean 16.7, SD 26.8	
Longest duration of breastfeeding an individual child (months) (range 6–60)	mean 15.7, SD 7.5	
Country of birth		
Australia	189	82.2
Other (UK = 11; NZ = 5; USA = 3; India = 2; Lebanon = 2; Argentina, Afghanistan, Belarus, Brazil, China, Fiji, Germany, Ireland, Singapore, South Africa, South Korea and Switzerland all = 1; Not stated = 6)	41	17.8
Current member of Australian Breastfeeding Association	80	34.8
Total number of mothers each peer supported in RUBY RCT (range 1–11)	mean 2.5, SD 1.7,	

<sup>a</sup>Ringling up About Breastfeeding Early randomised controlled trial



in which at least one call was made. In total, 359/ 518 (69%) Call Logs were received from volunteers who had made at least one call. The \$50 reimbursement offered for each mother supported was claimed by volunteers for 222/518 (43%) periods of support.

Overall, 2398 calls were recorded in the Call Logs, ranging in duration from 1 to 111 min, with a median duration of 12 min. The data related to missed calls and text messages were inconsistently reported and is not reported here. For example, some volunteers recorded each call attempt while others only recorded the first attempt but noted comments like 'tried lots of times'. The section for recording text messages was added several months into the trial following feedback from volunteers and is therefore incomplete. The texts were also recorded inconsistently, again with some volunteers recording each text, and others noting only the first text. After each call, volunteers were asked to record in their Call Log if they thought the woman valued/ appreciated the call. If they answered yes ( $n = 2300$ ), a closed-ended question explored which aspect of the call the mother valued (Table 4). From the volunteer's perspective, women appreciated the 'general emotional support' (51%) and 'general information/discussion provided about breastfeeding' (43.6%). Being 'someone to talk to but not necessarily about breastfeeding' also seemed to be valued by recipients (42%).

#### **Intervention delivery: content of calls**

Volunteers were asked to indicate the main concerns raised by the woman during each call, and were provided with a pre-coded list of topics (as well as having an option of 'other'). Of the 2398 calls, there were a total of 1576 (66%) calls during which a woman raised a specific topic (Table 5). Of those who raised concerns, we examined these responses across 'all calls' as well as by looking at topics raised 'during the first call' ( $n = 359$ ), 'during calls when baby age was less than 12 weeks of age (excluding the first call)' ( $n = 1459$ ) and finally, during calls where 'baby age was equal to or greater than 12 weeks' ( $n = 570$ ). The rationale for categorising responses into these timepoints was to explore if there was any change in topics over time.

Overall, 'normal infant behaviour' (22%), 'feed frequency' (16%), and 'general breastfeeding information' (15%) were the most frequent topics discussed. These continued to be the most frequent topics discussed at each time-point except during the first call, when 'nipple pain/ damage' (24%) was most frequently discussed (Table 5). 'Other' topics not in the pre-coded list were mostly related to bottle/ formula feeding, introducing solids/ weaning, infant well-being, return to work and breastfeeding in public.

#### **Referrals**

If a woman raised a concern that was beyond a volunteer's experience or was an issue better addressed by a professional or expert, the volunteer referred the woman to health or support services based on a list of recommended services. Volunteers reported referring women to one or more services during 673 of the 2398 calls recorded in the Call Logs (Table 6). The most common referral was to the ABA (56%). Other referrals were made to the Maternal and Child Health service, general practitioners, and lactation consultants.

#### **Discussion**

This paper describes key components involved in implementing the proactive telephone peer support intervention delivered in the RUBY RCT. In this paper we have focused on processes related to the peer volunteers, including their recruitment, training and support, and the role of the volunteer coordinator. These findings address a call for more detail on implementation of peer support interventions, which has been identified as a limitation when reviewing evidence from peer support RCTs [3]. Overall, we found that interest in participating in the peer support program within the RUBY study was strong and once women completed the training session, they were likely to provide support.

From the outset, our collaborative research partnership with the Australian Breastfeeding Association (ABA) provided multiple practical benefits when recruiting volunteers and developing the training session and manual. The important benefits obtained through engagement with existing local services and infrastructure

**Table 4** Aspects of the call the woman valued/appreciated (as assessed by peer volunteer)

Aspect valued in call	n (n = 2320)	% <sup>a</sup>
General emotional support	1182	51.0
General information/discussion about breastfeeding	1011	43.6
Someone to talk to but not necessarily about breastfeeding	975	42.0
Responses to specific breastfeeding related questions/ concerns raised by the woman	614	26.5
Unsure	54	2.3
Other	161	6.9

<sup>a</sup>More than one response could be selected, so % may add to more than 100

**Table 5** Main issues raised by women during calls (as per provided checklist)

5.Topic raised	During first call (n = 359)		Baby age < 12 weeks (excluding first call) (n = 1459)		Baby age ≥ 12 weeks (n = 570)		All calls (n = 2398)	
	n	% <sup>a</sup>	n	% <sup>a</sup>	n	% <sup>a</sup>	n	% <sup>a</sup>
Number of calls during which at least one specific concern was raised by mother	272	77%	977	67	321	56	1576	66
<b>Specific concern raised</b>								
Nipple pain/ damage	87	24	128	9	20	6	235	10
Feed frequency	80	22	228	16	68	12	376	16
Positioning/attachment	78	22	107	7	4	< 1	189	8
General BF information	83	23	218	15	65	11	366	15
Normal infant behaviour	71	20	341	23	106	19	518	22
Supply & demand	66	18	179	12	38	6	283	12
Expressing	63	18	189	13	48	8	300	13
Not enough milk	54	15	138	9	35	6	227	9
General concern/ anxiety	34	9	86	6	21	6	141	6
Engorgement	31	9	64	4	6	1	101	4
Mother's health problem	25	7	57	4	20	6	102	4
Nipple shield	23	6	44	3	2	< 1	69	3
Oversupply	18	5	53	4	7	1	78	3
Baby unwell	14	4	60	4	17	5	91	4
Tongue-tie	12	3	30	2	2	< 1	44	2
Bottle/ formula feeding	7	2	44	3	20	6	71	3
Mastitis	5	1	41	3	7	1	53	2
Nipple/ breast thrush	5	1	32	2	9	3	46	2
Infant wellbeing	3	< 1	25	2	11	3	39	2
BF in public/ travelling	1	< 1	20	1	4	1	25	1
Return to work	0	0	20	1	12	4	32	1
Introducing solids/ weaning	0	0	6	< 1	49	9	55	2
Other	1	< 1	10	< 1	7	1	18	< 1

<sup>a</sup>Respondents could tick more than one option so % could add to more than 100

**Table 6** Referrals made by volunteers during calls to mothers

Referral organisation/person/information source	n (n = 673)	% <sup>a</sup>
Australian Breastfeeding Association	378	56
Maternal and Child Health service	254	38
General Practitioner	116	17
Hospital lactation service	57	9
Private lactation consultant	51	8
Hospital service e.g. emergency department	11	2
Other <sup>b</sup>	133	20

<sup>a</sup>Respondents could tick more than one option so % could add to more than 100

<sup>b</sup>Includes referrals to specific websites (n = 61), neonatal sleep related resources (n = 17), pharmacists and hospital drug information call-lines (n = 15), health professionals such as paediatricians (n = 14), local government resources such as maternal and child health clinics or breastfeeding drop in centres and mothers' groups (n = 11), books (n = 4) and various other resources such as 'google' and 'baby wearing' products (n = 16)

with compatible aims has been described in previous peer support research [2, 13, 18]. The ABA is a national not-for-profit organisation providing community-based support for breastfeeding women [19]. The reach of the ABA online platforms provided significant leverage when recruiting peer supporters and using existing ABA resources, supported development of the RUBY training session and manual.

Following recruitment of peers, a second crucial step in breastfeeding peer support programs is linking peers with new mothers. How this is achieved depends on the design of the program, but all programs offering one to one peer support need a clear strategy for ensuring peers are aware of breastfeeding mothers, and provided with a means of contacting them [20]. As identified by Trickey et al., [21], delays in referring women caused by poor referral pathways may delay support during the early post-natal period when women are most vulnerable to

stopping breastfeeding [22]. Within the bounds of the RUBY study, this was achieved by research midwives recruiting mothers in the postnatal units of participating hospitals and the supporting role of the volunteer coordinator. Scale up of a similar program would need to consider how the link between mothers and peers would be facilitated.

The aim of the RUBY training session was to ensure peers could provide a supportive environment for new mothers to address the complexities of breastfeeding within their own unique contexts, while providing experiential insights that would assist this process. Having practical experience of a phenomenon does not necessarily equate to having the ability to share this experiential knowledge effectively [23, 24]. A key function of the RUBY training sessions was to explore the volunteers' attitudes (recognising own attitudes to infant feeding), skills (active listening, re-appraisal of concerns), and knowledge (common breastfeeding issues attitudes) in relation to breastfeeding. To some extent, the group training sessions provided the opportunity for peers to develop collective knowledge by hearing the stories of other peers. Sharing breastfeeding stories within a group may enable individuals to exceed the boundaries of their personal experience through the development of collective experiential knowledge [24].

The four-hour RUBY training session was significantly shorter than that described by other breastfeeding peer support programs, many of which offer 20 to 30 hours of training [21]. The content of the training session was similar to that provided to peers in previous successful breastfeeding peer support studies [2]. Based on the success of the RUBY peer support intervention in increasing the proportion of infants receiving breast milk at six months, and the overall positive feedback from peers in terms of their preparation for the role [13], more extensive training is not necessary. However, there may be contextual factors such as background rates of breastfeeding in the community and the peer's duration of breastfeeding that need to be considered. Data obtained from the Ruby Call Logs does however suggest there is scope for ongoing training to focus on topics raised later in the six-month period of support and the evolving needs of mothers.

Mothers' information needs evolve over time and this was demonstrated in the data collected in the RUBY Call Logs. Although 'feed frequency' remained a consistent topic of conversation throughout the duration of support, 'nipple pain/ damage' and 'positioning and attachment' were less likely to be raised when the infants were over three months old. In addition, free text responses across all time points indicated that issues related to infant sleep, introducing solids and 'breastfeeding outside the home' were raised by mothers. This is consistent

with previous studies that have reported how maternal concerns evolve during the early months of breastfeeding. Demirci and Bogen [25] reported positioning and attachment, fatigue, feed frequency and pain were common maternal concerns in the first postpartum week, whereas beyond week six to eight, mothers are more likely to identify perceived milk insufficiency, suspected infant reflux, feed frequency and managing breastfeeding upon return to work as concerns. Concerns regarding milk quantity and infant feeding difficulty including attachment, infant behaviour and nipple refusal may be associated with breastfeeding discontinuation and introduction of formula [26]. In the RUBY study, the mothers receiving peer support reported the most common concerns addressed by their peer supporter were milk supply, normal baby behaviour and effective infant attachment to the breast [27]. The evolution of information needs is not surprising but does highlight that peer training needs to take this into account.

The support provided by peers crosses several domains including appraisal, emotional and informational support [8]. In early work on social support, House identified emotional support as being crucial to conveying the perception of support to others [28]. In the context of breastfeeding, emotional support relates to expression of empathy and connectedness and is not necessarily only related to infant feeding [29]. The lived experience of a phenomenon can be used to create emotional connections and share pragmatic insights, and this has been one of peer support's strongest mechanisms of action [30]. RUBY volunteers perceived that emotional support was the main reason mothers valued the calls. The mothers in the RUBY study also reported receiving high levels of emotional support [27]. While it is difficult to disentangle and quantify the contribution of informational, emotional and appraisal support, it is important for peers to be aware that guidance and information regarding breastfeeding is only one component of the overall support they will provide.

### Limitations of this study

The data used in this paper were self-reported by RUBY volunteers and Call Log data were limited to those who returned the Call Logs. Personal breastfeeding experiences may have been conflated to ensure acceptance into the program. Volunteers' perceptions of what the mothers' main concerns were may not accurately reflect the mother's intentions. However, the data regarding topics raised by the mother are useful in determining content of training and ensuring the links to additional resource provided in the training manual are relevant.

Topics not included in our pre-coded Call Logs, including 'infant sleep', 'introducing solids' and

'breastfeeding outside the home' could be considered for inclusion in future versions of the Call Log and related resources be made more prominent in the training manual.

The study was undertaken within the bounds of an RCT in a setting with high breastfeeding initiation. Recruitment may be more challenging outside a research context and in settings with lower breastfeeding rates.

## Conclusions

Given the success of the RUBY intervention in increasing breastfeeding duration in the Australian context, it is important that sufficient details and insights into what was actually delivered are provided, to enable replication of the intervention by those seeking to establish a similar model outside the boundaries of an RCT [5, 31]. This study describes factors related to preparation and support of volunteers in the RUBY RCT that may be relevant to others implementing or scaling up similar interventions. The ABA were an important source of training resources and gave additional credibility to the program. Recruitment via the ABA online platforms generated high levels of interest from potential volunteers. After attending training, most volunteers went on to provide peer support. Peers were supported by a volunteer coordinator.

Future research into the experiences of peers could consider methods that enable exploration of the experiences all peers, throughout the study. In addition to the existing data collected in the Call Log, additional questions exploring the volunteers' experiences during the period of support may provide more nuanced insights than those collected at the end of the volunteer's period of participation.

The findings of the RUBY study are important as identifying interventions to increase the duration of breastfeeding has been challenging. The insights shared here will assist those planning breastfeeding peer support training programs and highlights the need for training of peers to meet the evolving information needs of mothers and further reporting of peer breastfeeding characteristics.

## Abbreviations

ABA: Australian Breastfeeding Association; RCT: Randomised controlled trial

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## Authors' contributions

All authors designed the study and participated in data collection tool design. HG undertook data collection. TS and HG led data analysis in collaboration with DF and HM. HG drafted the paper and all authors participated in paper revisions. DF is the Chief Investigator of the RUBY RCT, and HM and TS are co-investigators. All authors read and approved the final manuscript.

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## Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

## Declarations

### Ethics approval and consent to participate

Research ethics approval for the RUBY study (including this component) was obtained from La Trobe University (12–08), Royal Women's Hospital (12/25), Western Health (HREC/12.WH/107) and Monash Health (12251B). The RUBY trial was registered with the Australian and New Zealand Clinical Trials Registry prior to commencement (ACTRN12612001024831). Eligible women were recruited by research midwives during their postnatal hospital stay at one of the trial sites and those who agreed to participate provided written consent prior to randomisation. Volunteers who provided peer support signed a Privacy and Confidentiality agreement before being allocated their first mother.

### Consent for publication

Not applicable.

### Competing interests

The authors declare that they have no competing interests.

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***Forthcoming chapter***

The following chapter (**Chapter 8**) examines the experiences of the volunteers providing telephone-based peer support to identify issues that may impact the sustainability and implementation of interventions comparable to that used in the RUBY study. It includes a manuscript published in the journal *Public Health Nutrition*



## **Chapter 8 Volunteers' experiences of providing breastfeeding peer support in the RUBY randomised controlled trial (Component 2)**

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Evidence discussed in **Chapter 3** indicates that despite peers being integral to peer support programs, most attention has been given to empirical outcomes of interventions or to the experience of the recipient of the support. This chapter presents findings from Component 2 of the thesis and describes the views and experiences of volunteers who provided peer support in the RUBY study using data collected by an online survey. Following a discussion of the aims, data collection methods, and management of data used in this component, a published manuscript is provided.

### **AIMS OF COMPONENT 2**

The primary aim of this component of the study was to explore the experiences of the volunteers providing telephone-based peer support within the RUBY RCT to identify issues that may impact sustainability and implementation of the RUBY intervention, and similar peer support interventions. There has been very little quantitative research undertaken around peer support experience in the breastfeeding context.

### **RESEARCH QUESTIONS ADRESSED IN COMPONENT 2**

The RUBY Volunteers' Experience survey was developed with the following aims:

- to explore the motivations of women who volunteered to provide support to a breastfeeding mother within the RUBY RCT;
- to gain insights into the experience of delivering a proactive telephone peer support intervention within the bounds of the RUBY trial; and
- to identify the impact of volunteering on the peer volunteers.

## RATIONALE FOR CHOICE OF DESIGN FOR COMPONENT 2

A quantitative cross-sectional research design was used to survey volunteers regarding their motivations and experiences in the RUBY RCT. A cross-sectional survey is an economical method that is particularly suited to reaching large numbers of participants (Creswell & Creswell, 2017). In addition, surveys are able to capture a broad overview of a phenomenon. However, they may be limited in the extent to which data generated provides a deep understanding of the participants views and experiences (Saks & Allsop, 2012). The generalisability of findings from surveys can also be negatively impacted if an inadequate response rate is achieved. Factors which contribute to poor response rates include an inability to comprehend the survey, an inability to understand the language and difficulty in motivating respondents to answer 'boring' questions (Kumar, 2014; Saks & Allsop, 2012).

## DATA COLLECTION TOOLS

### Development of the survey

The RUBY Volunteer Experiences survey (**Appendix O**) comprised 33 items which included questions about volunteers' experiences of making RUBY calls, and their overall experiences as a volunteer, including the support they received from the RUBY team. Questions about participants' characteristics and their own breastfeeding experience were also included. Most questions comprised fixed choice response options using a five- or seven-point Likert scale, with some open-ended questions to allow further comment.

Self-administered surveys usually include mostly closed-ended questions as they are quicker to complete, appear less repetitious when multiple questions on the same topic are required, and more likely to be responded to than open-ended questions (Fowler, 2009). The addition of open-ended questions to surveys gives respondents the opportunity to expand on their responses and to convey personalised comments (Fowler, 2009). The response formats for the closed-ended questions included binary



(yes/no), nominal, interval, and ordinal measures such as Likert-type scales. Where appropriate, binary measures included an option for respondents to provide more information. For example, for the question 'Is English your first language?', the 'no' option included 'what is your first language?' in parenthesis and provided space for a response. Likert-type scales were used to measure the intensity of feelings about the area of interest. In this questionnaire, the respondents were provided with a statement (e.g., 'I would have liked ongoing training sessions during my time as a RUBY volunteer ') and asked the extent to which she agreed. These questions typically provided a 5- to 7-point scale of 'strongly agree' to 'strongly disagree', with a neutral option in the middle.

### **Validity and reliability**

The validity of a survey refers to the extent to which the instrument measures what it is supposed to measure (Taherdoost, 2016). Validity isn't necessarily an inherent property of a particular measure or instrument, and is influenced by the context in which it is used (White, Armstrong, & Saracci, 2008). Four types of validity can be assessed; face validity, content validity, construct validity and criterion validity (Fowler, 2009). Face validity is a subjective assessment of whether the instrument is fit for the intended purpose. Content validity is an informed ('expert') assessment of the extent to which an instrument adequately covers important aspects of the topic under examination (Jha & McDonagh, 2020). Construct validity refers to the degree to which an instrument measures a theoretical concept (e.g., 'satisfaction') (Jha & McDonagh, 2020) and criterion validity is assessed when comparing results from a new measure, against an existing validated measure (Jha & McDonagh, 2020). Criterion validity was not relevant to this study; however, assessment of face, content and construct validity was undertaken.

The reliability of an instrument can be described as the extent to which the measurement of a phenomenon is consistent and stable over repeated measures (Taherdoost, 2016). Reliability may be influenced by inherent properties of the survey such as the ambiguous wording of questions or external factors such as the physical setting in which the survey is administered, and the respondent's mood (Kumar, 2014).

The questions should be interpreted in the same way by respondents, and the language and terms used must be appropriate (Fowler, 2009). A regression effect may be seen where the results of a survey are altered because the respondent modifies their responses when the survey is administered a second time (Kumar, 2014).

The RUBY Volunteer Experiences questionnaire included questions that had been used in previous studies conducted by the team, this included questions eliciting demographic information and respondent's breastfeeding experiences. In addition, the validity and reliability of the questionnaire used in this study was enhanced by conducting a literature review to identify relevant constructs related to 'volunteering', 'peer support' and 'breastfeeding support'. The RUBY research team collectively had extensive experience in breastfeeding research and quantitative methods, including survey research.

Questions related to the motivations to volunteer were informed by a validated scale, the Volunteer Functional Inventory (VFI) (Clary et al., 1998). When used in its entirety, the VFI comprises five items for each of the six functions which are assessed using a Likert rating scale and respondents are asked to identify the extent to which they agree with each of the 30 items. The nature of this study was to explore not only the motivation of RUBY volunteers but also their experience and perception of the peer support role. After consultation with Dr Arthur Stukus, a co-developer of the VFI, we selected twelve salient items that reflected each of the six functions and modified the wording and tense to suit our context. We analysed the items as individual variables rather than composite scales, again after consultation with Dr Arthur Stukus. The modified items from the VFI were not validated with participants. In this study, the 12 items modified from the VFI were including in a question comprising 19 items that asked volunteers about their motivations, views and experiences of being a volunteer.

The VFI has been found to increase the rate of usable responses compared with open-ended questions when exploring volunteer motivations. In Allison et al.s' (2002) study, an open-ended question asking respondents to list their motivations for volunteering was followed by the 30-item VFI. In the study, of the 195 surveys completed, over one

third of participants did not provide a response to the open-ended question. This was in comparison to the question using the VFI which was completed by all respondents. This finding suggests that using a validated scale like the VFI may increase the likelihood of participants providing usable responses, thus this informed our decision to use the modified VFI.

### **Piloting of the survey**

Piloting is an important component of ensuring validity and reliability and is essential even if the questions are based on those that have been used in previous studies. The aim of piloting is to identify ambiguities or potential misinterpretation of a question, and to ensure readability of the text. The piloting process also identifies formatting, typographic and grammatical problem in the survey structure (Jha & McDonagh, 2020). Piloting was achieved by distributing the survey in paper-based format to research colleagues who have expertise in breastfeeding support (n = 7). Ambiguities, grammatical and typographical errors were corrected. Feedback was submitted to the research team who considered the suggested amendments. The subsequent version with accepted amendments was piloted again. This process was repeated twice. The survey was re-piloted until no further issues were identified. The survey was then sent to 'lay' people (n = 4) to check for clarity. No problems were identified by the participants or when their responses were reviewed.

The survey was then loaded on the Qualtrics web-based platform (Qualtrics, 2013). Further editing of the questions was required to adapt the survey to this format. The electronic survey was piloted by a group who included breastfeeding researchers (5), a lay-person (1), midwives (4) and an Australian breastfeeding Association counsellor (1). Further editing of questions format and the email invitation ensued. The final electronic version of the survey was considered ready for release on 4<sup>th</sup> September 2014.

### **Inclusion criteria and consent**

Those eligible for this study were volunteers who supported at least one mother in the RUBY RCT. They were invited to complete the survey when they finished supporting

their last mother in the study (n = 230). The volunteer coordinator (the candidate) emailed volunteers a cover letter and a link to the self-administered online survey between September 2014 and May 2016. Completion of the survey was taken as consent to participate.

## DATA COLLECTION PROCESSES

The RUBY Volunteer Experiences survey was self-administered online via the Qualtrics platform (Qualtrics, 2013). The question of which mode of delivery (for example, postal, via telephone, or more recently via web-based platforms) is more efficient, yields higher response rates, or similar responses to the same questions has generated much research interest (Cantuaria & Blanes-Vidal, 2019; Fan & Yan, 2010; Sinclair, O'Toole, Malawaraarachchi, & Leder, 2012). Overall, for this study, the advantages of using an electronic survey were: reduced cost and potentially faster return times coupled with ease of importing data into a statistical package without the risk of data entry errors (Fowler, 2009). The 'skip' function and ease of formatting questions using the Qualtrics platform was also useful (Qualtrics, 2013). In addition, self-administered surveys can be completed at a time that is convenient for respondents and do not inhibit responses to the same extent as a face-to-face interview (Bryman, 2012). Self-administered surveys may also promote more truthful responses by providing anonymity if the participant considers the questions sensitive and allows respondents more time to reflect on questions and recall details (Saks & Allsop, 2012).

Potential disadvantages of online surveys, such as respondents having limited internet access or researchers being unable to adequately describe the sample of respondents, were not apparent in this study. All those invited to respond had provided email addresses and links to the survey were only sent to RUBY volunteers who met the eligibility criteria. Respondents may have experienced variable download speeds and used different devices to access the survey, but all had access to the internet as was demonstrated by previous email communication. The email inviting volunteers to complete the survey advised them a hardcopy was available on request. However, no RUBY volunteer requested a hardcopy of the survey. Compared to telephone surveys,

self-administered surveys are also limited by the inability of researchers to prompt respondents having difficulty answering a question or to probe for further information (Bryman, 2012).

Web-based surveys have generally achieved lower response rates than comparable postal surveys (Blumenberg & Barros, 2018; Fan & Yan, 2010). Blumenburg & Barros's (2018) systematic review of 19 studies (randomised controlled trials  $n=9$ ; cross-sectional  $n=10$ ) conducted between 2002 – 2015 suggests that increased internet usage and availability hasn't altered this finding. However, despite this trend, strategies can be used to increase response rates. Sending email or short message service (SMS) reminders and including an electronic link to the survey, assists in increasing response rates (Blumenberg & Barros, 2018; Van Mol, 2017). The eligible RUBY volunteers were sent an encouraging and personalised email with the survey link embedded. The email was sent from the dedicated 'RUBY' study email address. Respondents had received several previous emails from this address, so it was unlikely to be identified as 'spam' by their email program. The survey introduction outlined the aim of the survey, the anticipated time for completion, and instructions for moving past any question respondents were uncomfortable answering. The cover letter (**Appendix P**) explained that participation was voluntary and that responses would be anonymous. To increase the response rate, all volunteers were sent two email reminders; the first reminder was sent two weeks after the initial mail out, and the second one, two weeks following that (Van Mol, 2017). As we were unable to identify the respondents, the reminder email included a 'thank-you' for any women who had already responded, and a reminder to complete the survey for those who had not done so.

## DATA MANAGEMENT AND ANALYSIS

### Management of data

Data were imported from Qualtrics to Stata Version 15 for cleaning and analysis (StataCorp, 2017). Data cleaning proceeded in Stata, all questions were checked to ensure responses were appropriate and within a feasible range. Any anomalous data

were checked against other survey responses (e.g., open-ended responses) and the RUBY volunteer database. All survey data were saved on a La Trobe University password protected secure drive, only accessible by the RUBY research team.

### **Statistical analysis of quantitative data**

The statistical software package Stata 15 (StataCorp, 2017) was used for quantitative data analysis. Descriptive statistics were used to summarise raw data into values that represented scores and described the distribution of data (Saks & Allsop, 2012). In this study, descriptive statistics were used to present the demographic characteristics of the participants who responded to the survey. Frequencies, percentages, and measures of central tendency such as the mean of a variable were used to describe the data. Likert-type items were analysed as ordinal variables and, in some cases, collapsed to provide dichotomous variables. New variables were generated from the original data set as required.

### **Content analysis of open-ended questions**

Responses to open-ended questions were analysed using content analysis (O'Cathain & Thomas, 2004). Leedy and Ormrod (2015, p. 155) define content analysis '...a detailed and systematic examination of the contents of a particular body of material for the purpose of identifying patterns, themes, or biases. A preliminary sample of the responses was coded to identify the answers most frequently reported. A second researcher (HAM) checked the coding of the data for reliability, as there is a possibility of variation in interpretation of participants' responses (Saks & Allsop, 2012). Themes that emerged from this sample of responses formed the initial categories within the coding frame. These categories were amended and expanded as further coding of the data was completed. Each instance of a theme or characteristic was recorded. In this way, content analysis produced numbers that could be analysed in a quantifiable way, unlike typical qualitative research that usually works with text (Leedy & Ormrod, 2015).

## CANDIDATE CONTRIBUTION TO PEER REVIEWED PAPER INCLUDED BELOW

I declare that I have made a substantial contribution to this paper, including contributing to the overall study design. I undertook data management and analysis, with the support of my supervision team and drafted the paper. The co-authors all contributed to the overall study design, intellectual input, and editing of the manuscript.

## Citation

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The candidate's contribution to this manuscript was approximately 70%.	
Candidate:	Date: 27 <sup>th</sup> October 2021
Principal supervisor:	Date: 27 <sup>th</sup> October 2021





# Volunteers' experiences of providing telephone-based breast-feeding peer support in the RUBY randomised controlled trial

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## Abstract

**Objective:** The Ringing Up About Breastfeeding earlyY (RUBY) randomised controlled trial (RCT) found that a telephone-based peer volunteer support intervention increased breast-feeding duration in a setting with high breast-feeding initiation. This sub-study of the RUBY RCT describes the motivation, preparation and experiences of volunteers who provided the peer support intervention.

**Design:** An online survey was completed by 154 (67 %) volunteers after ceasing volunteering.

**Setting:** Volunteers provided peer support to primiparous women (*n* 574) who birthed at one of three public hospitals in Melbourne, Australia, between February 2013 and December 2015.

**Participants:** Volunteers (*n* 230) had themselves breastfed for at least 6 months and received 4 h of training for the role.

**Results:** The median number of mothers supported was two (range 1–11), and two-thirds of respondents supported at least one mother for 6 months. Volunteers were motivated by a strong desire to support new mothers to establish and continue breast-feeding. Most (93 %) considered the training session adequate. The majority (60 %) reported following the call schedule 'most of the time', but many commented that 'it depends on the mother'. Overall, 84 % of volunteers were satisfied with the role and reported that the experience was enjoyable (85 %) and worthwhile (90 %). Volunteers agreed that telephone support for breast-feeding was valued by women (88 %) and that the programme would be effective in helping women to breastfeed (93 %).

**Conclusions:** These findings are important for those developing similar peer support programmes in which recruiting volunteers and developing training requirements are an integral and recurrent part of volunteer management.

**Keywords**  
Peer support  
Breast-feeding  
Breast-feeding support  
Volunteer

Breast-feeding has substantial health benefits for women and children. Infants who are not breastfed are at increased risk of long-term health conditions such as sudden infant death syndrome, respiratory and gastrointestinal infections, otitis media, asthma, type 1 and type 2 diabetes and overweight and obesity<sup>(1)</sup>. Maternal benefits include enhanced spacing between pregnancies, reduced risk of ovarian and invasive breast cancer and reduced maternal depression<sup>(1)</sup>. Despite high breast-feeding initiation in Australia, cessation in the early postpartum period limits the health benefits for mothers and infants. The latest Australian national infant feeding survey, conducted in 2010, found that 96 % of

infants commenced breast-feeding; however, only 15 % were exclusively breastfed to 6 months, with 60 % receiving any breast milk at 6 months<sup>(2)</sup>. This is significantly less than the 6 months of exclusive breast-feeding recommended by the WHO<sup>(3)</sup> and Australian health authorities<sup>(4,5)</sup>. There are limited effective strategies to increase breast-feeding duration in countries with high initiation rates such as Australia<sup>(6,7)</sup>. Lack of support is a risk factor for early breast-feeding cessation<sup>(8)</sup>, and a systematic review found all forms of extra support, whether delivered by a professional and/or non-professional, decreased the risk of ceasing *any* breast-feeding before 6 months of age<sup>(7)</sup>. Whether

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support was received face to face, by telephone or both, also made no difference in rates of cessation of *any* breast-feeding up to 6 months<sup>(7)</sup>.

The Ringing Up About Breastfeeding earlyY (RUBY) randomised-controlled trial (RCT) aimed to determine whether *proactive peer* support, provided in the postnatal period by telephone, increased the proportion of infants who were breastfed for at least 6 months. Primiparous women (*n* 1152) were recruited to the study while in hospital in the first few days postpartum and were randomly allocated to receive either 'usual care' or 'usual care' plus telephone-based peer support. Women randomised to the intervention arm received proactive telephone peer support for 6 months postpartum guided by a specific call schedule. Women in the intervention arm received their first call from a peer volunteer 4 to 6 days postpartum. Weekly calls were made until 12 weeks postpartum and monthly calls continued for 6 months postpartum. The frequency of the calls could be adjusted at the mother's request and mothers could contact the volunteers between scheduled calls. Volunteers offered breast-feeding and general parenting support and directed women to existing local services if required<sup>(9)</sup>. The study found more infants of women assigned to proactive telephone peer support were receiving *any* breast milk at 6 months of age compared with women assigned to usual care, a relative increase of 10%: (adjusted relative risk 1.10; 95% CI 1.02, 1.18)<sup>(10)</sup>. There was weaker evidence of an association with infants receiving *only* breast milk (adjusted relative risk 1.10; 95% CI 0.97, 1.23)<sup>(10)</sup>.

In addition to testing the effectiveness of interventions, understanding the factors that impact on intervention delivery is important. This includes providing adequate description of those who provide the intervention, especially in studies where characteristics of the provider may influence outcomes<sup>(11)</sup>. The outcomes of studies examining peer support interventions may be influenced by factors such as the number of participants providing the intervention, their background, experiences and training and whether they were specifically recruited as volunteers or were providing the intervention as part of their usual role, and provision of reimbursement or incentives<sup>(11)</sup>.

The proactive telephone peer support intervention used in the RUBY RCT was based on the widely cited definition by Dennis as 'the provision of emotional, appraisal, and informational assistance by a created social network member who possesses experiential knowledge of a specific behaviour or stressor and similar characteristics as the target population'<sup>(12, p. 329)</sup>. While this definition is useful in describing the broad elements of peer support, a more focused examination of the intervention including the implementation context is required prior to scaling-up to reach a broader population or different setting. In a realist review of breast-feeding peer support, Trickey *et al.*<sup>(13)</sup> highlight the need to address factors such as congruence with existing healthcare pathways,

sociodemographic characteristics of peers, including matching with participant and the peer-mother relationship. Ensuring adequate numbers of peers is available to sustain successful programmes is an important consideration prior to scaling up and increasing their reach<sup>(14,15)</sup>. Failure to recruit adequate numbers of volunteers and rapid turnover may undermine volunteer peer support programmes<sup>(16)</sup>.

Although current evidence describes mostly positive outcomes for peer volunteers, the studies are diverse in terms of context, programme design and methodology<sup>(17,18)</sup>. Reported benefits to the peer supporters include the satisfaction of helping the recipient<sup>(17–20)</sup> and improved confidence and self-esteem<sup>(17–19)</sup>. Social connection between volunteers can increase their motivation to help others and reduces feelings of isolation they may experience<sup>(19)</sup>. The experience may be less satisfying if the volunteers perceive help is not valued by the recipient<sup>(20,21)</sup>. Factors that enhance the peer experience include feeling that they are reciprocating or giving back support they had received<sup>(17,19,22,23)</sup> and sharing their own experiences and knowledge<sup>(17,20,24)</sup>. Volunteers may experience anxiety related to the role<sup>(20)</sup>; however, it is also an opportunity for them to reconcile personal experiences related to the peer support role that they may have found challenging in the past<sup>(17,19)</sup>. This may involve reinterpreting their experience as something that is now of benefit to others<sup>(19)</sup> or gaining a new perspective or sense of closure<sup>(17)</sup>. Adequate training and preparation for the role and ongoing support from programme organisers can assist volunteers to overcome challenges and provide quality control<sup>(25)</sup>.

To identify issues that may impact sustainability and implementation of the RUBY intervention and similar peer support interventions, we aimed to explore the experiences of the women providing telephone-based peer support within the RUBY RCT. These insights will be relevant to those developing and implementing future peer support interventions for breast-feeding women.

## Methods

### ***The Ringing Up About Breastfeeding earlyY trial: volunteer recruitment and training***

Volunteer peer supporters were recruited from the community primarily by advertisements in the Australian Breastfeeding Association\* newsletter and electronic media (mainly from ABA Facebook page) between January 2013 and May 2015. Volunteers were eligible to participate if they had successfully breastfed for at least 6 months, had a positive attitude to breast-feeding, agreed to attend a 4-h training session and had not participated in more than 8 hours of formal breast-feeding education. Topics covered in the training session included effective communication,

\*The ABA is a non-profit, volunteer organisation and Australia's largest breast-feeding information and support service (<https://www.breastfeeding.asn.au/>).



normal breast-feeding behaviour, resources available to new breast-feeding mothers and cultural and social factors related to infant feeding. Volunteers received an information manual which included referral resources. The training session was conducted in partnership with the Australian Breastfeeding Association.

Of the 246 volunteers who completed RUBY training, thirteen of those did not go on to be allocated a mother, mostly due to being too busy with family and work commitments, or wishing to pursue breast-feeding counsellor training, which made them ineligible to participate. Subsequently, 233 volunteers were allocated a mother to support. Of those, three volunteers provided no support due to changed personal circumstances and the mothers were reallocated. The remaining 230 volunteers provided peer support to at least one mother. A volunteer coordinator (H.A.G.) facilitated contact by providing volunteers with the mother's first name and phone number and provided ongoing support through regular phone or email contact. For clarity in this paper, those providing peer support will be referred to as the 'volunteer(s)' and recipients of the support as the 'mother(s)'.

### Participants in this study

All volunteers who supported at least one mother in the RUBY RCT were invited to participate in an online survey when they completed support of their last mother in the study ( $n$  230). Between September 2014 and May 2016, the volunteer coordinator emailed volunteers a cover letter and link to the self-administered online survey. The cover letter explained that participation was voluntary and that responses would be anonymous. Completion of the survey was taken as consent to participate.

All volunteers were sent two email reminders; the first 2 weeks after the initial mail out, and the second 2 weeks later. As we were unable to identify the respondents, the reminder email included a 'thank-you' for any women who had already responded.

### Data collection

The survey comprised thirty-three items, which included questions about volunteers' experiences of making RUBY calls, and their overall experiences as a volunteer, including the support they received from the RUBY team. Questions about participants' characteristics and their own breast-feeding experience were also included. Most questions comprised fixed choice response options using a five- or seven-point Likert scale, with some open-ended questions to allow further comment. The survey was piloted several times by midwifery research colleagues with expertise in breast-feeding support ( $n$  7) and breast-feeding women ( $n$  4). Ambiguities, grammatical and typographical errors were identified and corrected. The final version of the survey was uploaded to the secure

Qualtrics platform<sup>(26)</sup>. A further round of piloting ensured the electronic version was clear and functional.

One question included nineteen items that asked volunteers about their motivations, views and experiences of being a volunteer. Of the nineteen items, twelve were derived from the Volunteer Functional Inventory (VFI)<sup>(27)</sup>. The VFI is a thirty-item scale consisting of six motivational functions that assess the different motivations that people may hold regarding volunteerism and suggests people may perform the same actions to meet different individual needs<sup>(27)</sup>. The functions served by volunteering comprise a *values* function, with volunteers seeking to express values that are altruistic or related to an area of humanitarian concern; an *understanding* function, with individuals seeking to open themselves up to new learning experiences and to develop new skills; a *social* function that enables opportunities for social connection or enhanced social approval; a *career* function that motivates volunteers who want improve their career prospects; a *protective* function that allows volunteers to distract themselves from their own problems; and an *enhancement* function to improve volunteers' feelings about themselves<sup>(27,28)</sup>.

The nature of this study was to explore not only the motivation of RUBY volunteers but also their experience and perception of the peer support role. After consultation with Dr Arthur Stukus, a co-developer of the VFI, we selected twelve salient items that reflected each of the six functions and modified the wording and tense to suit our context. We analysed the items as individual variables rather than composite scales, again after consultation with Dr Arthur Stukus. The modified items from the VFI were not validated with participants.

### Data analysis

Quantitative data were analysed using Stata version 15<sup>(29)</sup>. Frequencies, percentages and means were used to describe the data. Likert-type items were analysed as ordinal variables and 'where indicated' collapsed to provide dichotomous responses. The twelve items derived from the VFI were analysed individually rather than as composite scales.

Responses to qualitative open-ended questions were analysed by the first author using the content analysis technique described by O'Cathain and Thomas<sup>(30)</sup>. The responses were read, and a coding frame devised to describe the thematic content of the comments. Codes were assigned, and the data were re-examined and checked by another member of the team (H.L.M.). Results are reported with the number of respondents contributing to each theme and where appropriate, verbatim comments are used to illustrate the themes.

### Results

Of the 230 volunteers who were invited to participate, 154 (67%) completed the online survey. The mean age of

**Table 1** Participants' characteristics

Participant characteristics (n 154)	n	%
Mother's age in years (n 145*, mean = 35.1, sd 5.4, range 23–63)		
18–25 years	2	<1
26–34 years	79	55
≥35 years	64	44
Number of children (n 145, range 1–7)		
One child	58	40
Two children	69	48
More than two children	18	12
Youngest baby's age at time of enrolment (months): (n 144, median = 24, IQR = 12.5)		
Married or living with partner (n 145)	135	93
Completed a degree or higher (n 145)	119	82
Household income before tax at time survey completed† (\$AUD) (n 142)		
<\$999 per week (<\$51,999 per year)	22	16
\$1000–\$1999 per week (\$52,000–\$103,999 per year)	60	42
More than \$2000 per week (\$104,000 or more per year)	60	42
Country of birth (n 144)		
Australia	118	82
Other (UK = 8; USA = 3; NZ = 3; Argentina = 2; Afghanistan, Belarus, Brazil, Germany, India, Lebanon, Poland, South Africa, South Korea and Switzerland all = 1)	26	18
English first language (n 143)	137	96
Employment (n 145‡)		
Employed part-time	78	54
Home duties	43	30
Maternity leave	23	16
Employed full time	19	13
Student part time	10	7
Student full time	7	5
Self-employed	5	<1

\*Eleven respondents did not complete some or all the demographic questions.

†In Australia, the median weekly gross household income in 2017–2018 was \$1701<sup>(42)</sup>.

‡Participants could choose more than one response.

respondents was 35 (sd 5) years, most were married or living with a partner (93%), had completed a university degree (82%) and were born in Australia (82%). Most had English as their first language (96%) and were employed part-time (54%) (Table 1).

### Volunteers' own breast-feeding experiences

Respondents had themselves breastfed a median of two children (range 1–7). Their longest duration of breast-feeding an individual child was a median of 21 months (range 8–51 months). The majority (59%, 85/145) had breastfed for as long as they had planned and just over half (83/144, 58%) felt supported during their first month of breast-feeding.

Responses to open-ended questions regarding volunteers' own breast-feeding experience suggest that nearly half experienced positive support (51/109, 47%) from a variety of sources including health professionals, family, online forums and privately accessed lactation consultants (*I had a relative who had breastfed three children ... She*

*was a passionate advocate and supported me a lot. In those early days, when I was really struggling I called a parents hotline but they suggested going back to the hospital lactation clinic where I gave birth, and that was the best thing I did – I highly recommend doing that to anyone I know*). However, some described experiences of feeling unsupported by either their social group (28/109, 26%), for example, *I had a lot of pressure on me from my parents and one aunt to supplement with formula*, and/or health professionals (15/109, 14%), for example, *It almost broke me first time around! I didn't get the help I needed in hospital*.

### Volunteers' motivation to participate in Ringing Up About Breastfeeding early

Volunteers responded to a series of nineteen statements related to their motivations, views and experiences of being a volunteer. The statements included twelve items from the VFI<sup>(27)</sup>, and responses were noted on a seven-point scale ('strongly disagree' to 'strongly agree'). Table 2 shows the strongest motivator for volunteering was related to the 'values' function. Through volunteering for RUBY, most volunteers 'agreed' or 'strongly agreed' that they were doing something for a cause that was important to them (95%). The enhancement function which increases an individual's positive feelings towards themselves was also identified as important. Most volunteers (n 94, 66%) 'agreed' or 'strongly agreed' that they were making an important contribution by volunteering with RUBY and almost 65% of volunteers 'agreed' or 'strongly agreed' that the volunteer experience has been personally fulfilling. Items related to volunteering as a way of overcoming personal problems or enhancing their career prospects were not important motivators for most volunteers.

### Volunteers' experience of providing peer support

#### Preparation and support for the role

Most volunteers felt supported (141/144, 98%) and valued (142/144, 99%) by the RUBY team. Volunteers were asked about the preparation and support they received from the RUBY team for the peer support role. The majority felt that the 4-h training session prepared them well (134/144, 93%) and that the training manual was a useful resource (117/144, 81%) (Fig. 1). Nearly one-third indicated that they (42/144, 29%) would have liked ongoing training.

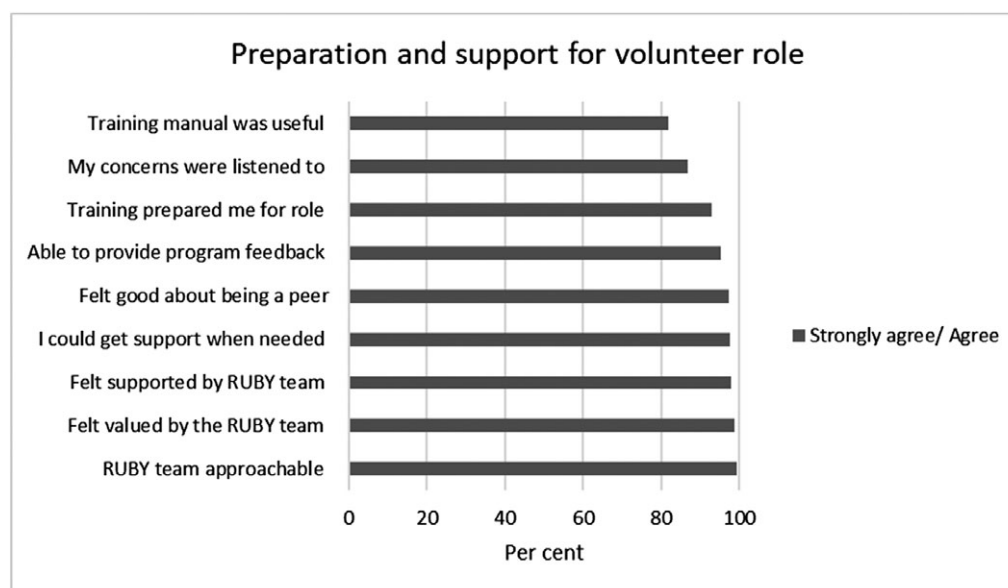
During the RUBY intervention, volunteers were invited to twice yearly 'social' events that aimed to foster support amongst attendees. We provided catering and facilitated a relaxed informal group discussion for approximately 2 h. Only 13% of volunteers attended one or more of these events. We asked volunteers an open-ended question about the value of these events, and responses from those who did attend all included comments about the benefits of interacting with other volunteers in a social setting:

**Table 2** Volunteers' motivation to participate

	Strongly disagree		Disagree		Somewhat disagree		Neither agree or disagree		Somewhat agree		Agree		Strongly agree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Values</b>														
By volunteering for RUBY, I am doing something for a cause that is important to me* ( <i>n</i> 145)	0	0	0	0	1	1	0	0	7	5	45	31	92	64
People I am genuinely concerned about were helped by me volunteering for RUBY* ( <i>n</i> 143)	6	4	14	10	7	5	31	22	36	25	32	22	17	12
<b>Enhancement</b>														
I can make an important contribution by volunteering with RUBY ( <i>n</i> 143)	0	0	3	2	7	5	12	8	27	19	50	35	44	31
My volunteer experience is personally fulfilling* ( <i>n</i> 145)	0	0	4	3	8	6	13	9	26	18	52	36	42	29
I feel needed while volunteering* ( <i>n</i> 145)	2	1	11	8	8	6	23	16	43	30	39	27	19	13
<b>Social</b>														
Volunteering is valued by my friends and family* ( <i>n</i> 145)	1	1	7	5	5	4	3	2	37	26	55	38	37	26
People I am close to value the fact that I volunteer* ( <i>n</i> 145)	4	3	4	3	5	4	27	19	44	30	45	31	16	11
<b>Understanding</b>														
I am able to learn more about the importance of breast-feeding support by volunteering with RUBY* ( <i>n</i> 144)	4	3	10	7	9	6	22	15	30	21	41	29	28	19
I can learn how to deal with a variety of people through volunteering for the RUBY study* ( <i>n</i> 145)	1	1	21	15	8	6	38	26	47	32	25	17	5	4
<b>Career</b>														
As a volunteer for RUBY, I can explore possible career options* ( <i>n</i> 144)	20	14	47	33	18	13	27	19	18	13	11	8	3	2
In volunteering for the RUBY study, I can make new contacts that might help my career* ( <i>n</i> 146)	34	23	51	35	9	6	33	23	12	8	5	3	2	1
<b>Protective</b>														
Volunteering with RUBY helps me escape my own troubles* ( <i>n</i> 144)	35	24	44	31	15	10	30	21	15	10	5	3	0	0
By volunteering for RUBY, I can work through some of my own personal problems* ( <i>n</i> 144)	33	23	38	26	19	13	38	26	12	8	4	3	0	0

\*Twelve items are based on items included in the Volunteer Functional Inventory (VFI).





**Fig. 1** Preparation and support for the volunteer role

*'This was really important to me. It was great to hear about other people's experiences and to share the experience of being a volunteer' and 'Fabulous! I made some lifelong friends, thanks'.*

### **Volunteers' experience of the call schedule and duration of support**

Each volunteer provided peer support to a median of two mothers (range 1–11). Approximately 51 % supported two or three mothers and 34 % supported only one mother (Table 3). Volunteers were asked how many mothers they had supported for the full 6 months. More than two-thirds responded that they had supported between one and five mothers for the full 6 months (97/151, 63 %). Approximately one-third were unable to support a mother for the full duration (52/151, 34 %), and two volunteers could not recall (Table 3). Volunteers were asked why they were unable to support a mother for the full 6 months. Of the twenty-eight open-ended responses to the question, the most frequent reasons were being unable to contact the mother ( $n$  15), the mother ceased breast-feeding ( $n$  14) and the mother requesting no further contact ( $n$  6). Six volunteers reported that the mothers were not having any difficulties and did not need further support. Only three volunteers ended the period of support before 6 months because they themselves were unable to continue (pending birth of their child, moved overseas).

When asked what they thought about the length of time they were asked to provide support, 63 % (94/150) felt that it was 'about right' and 24 % (36/150) felt that it was 'too long'. The call schedule directed volunteers to telephone mothers at weekly intervals until the baby was 12 weeks of age and then monthly until the baby was 6 months of

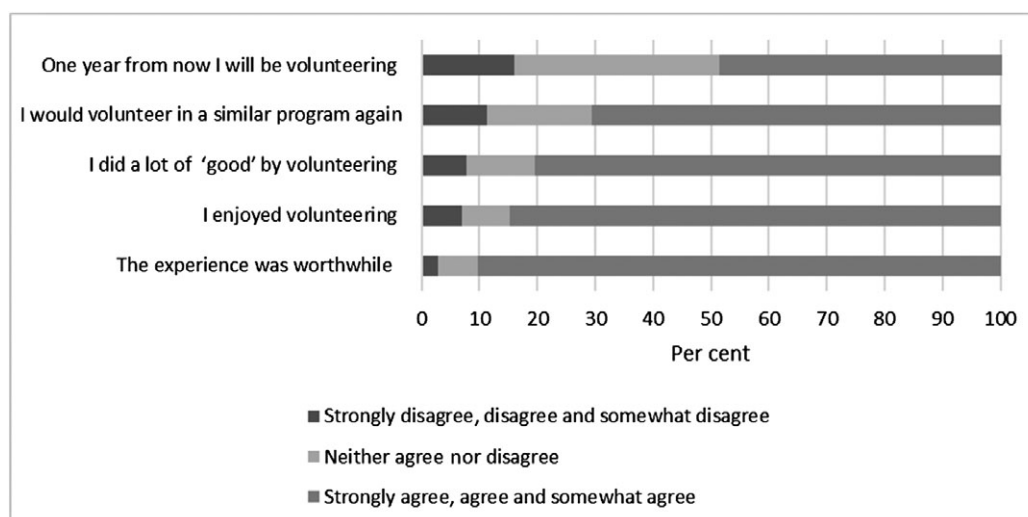
**Table 3** Number of mothers and duration of support provided

	<i>n</i>	%
Number of mothers volunteers' supported (excluding those who volunteer was unable to contact) <i>n</i> 150		
One mother	51	34
Two mothers	38	25
Three mothers	39	26
Four mothers	11	7
Five mothers	2	1
Six mothers	5	3
Eleven mothers	1	<1
Cannot recall	3	<1
Mothers volunteers supported for full 6 months ( <i>n</i> 151)		
I was unable to support any mothers for 6 months	52	34
I cannot recall	2	1
One mother	51	33
Two mothers	29	19
Three mothers	14	9
Four mothers	2	1
Five mothers	1	<1

age. Nearly 60 % (90/150) responded that they followed the call schedule most of the time.

### **Volunteers' experience of providing support**

A global question assessed satisfaction with the peer support role with a single item 'Overall, how satisfied were you with your role as a volunteer in the RUBY study' using a five-point scale ranging from 'very dissatisfied' to 'very satisfied'. Overall, 84 % of volunteers were satisfied with the role ('satisfied' 73/145, 50 % or 'very satisfied' 49/145, 34 %). The volunteers were also asked a range of specific questions related to their satisfaction with the peer support role using a 7-point scale from 'strongly disagree' to 'strongly agree' (Fig. 2). The majority agreed that the



**Fig. 2** Agreement with statements related to enjoyment of the role and future intention to volunteer

experience was worthwhile (90%), that they enjoyed their volunteer experience (85%) and that they would volunteer to provide telephone support in the future if a programme like RUBY was offered (71%).

Using open-ended questions, we explored volunteers' views regarding positive and negative aspects of the role. The number of respondents making comments related to the themes is provided in brackets. The main themes related to positive aspects of the role were personal reward ( $n$  46) (*It was very rewarding being able to assist someone in their breastfeeding and parenting journey and there was a real sense of accomplishment that was shared by the mother and myself on completion of the 6 months*); enjoyment ( $n$  33) (*I enjoyed supporting mothers when often they felt unsupported. I felt joy in supporting breastfeeding and felt that it was my investment toward a child regardless of who they were*); and empathy ( $n$  23) (*It was lovely to support a new mother in those early days. It brought back all sorts of memories of my own experiences, which I think helped me provide better support*).

Of the 142 responses to the question asking about challenges associated with the role, the main challenges were initiating and maintaining contact with the mothers ( $n$  44), competing demands ( $n$  29) and managing situations where the mother did not need breast-feeding support ( $n$  21) such as *'one mother required little help, breastfeeding was a breeze and I didn't feel like much help most of the time'*. Volunteers described how *'continually trying to contact hard to reach mothers – it could become quite time consuming'* and *'finding the time to call – both in the preparation, actual call time, and post with paperwork – can be challenging when juggling small children and a busy schedule'*. Other challenges related to not taking things personally ( $n$  20) typified by the comment *'It was quite depressing giving of your own time to then be spoken to rudely, messages or calls not responded to, not even*

*answering when asked if they would like the contact to cease'* and communicating with women from non-English speaking backgrounds ( $n$  18).

### **Why volunteers stopped volunteering in the Ringing Up About Breastfeeding earlyY study?**

We asked volunteers a closed-ended question about why they stopped volunteering in the RUBY study. A change in family commitments was the most common reason given (46/151, 30%) followed by the RUBY study finishing (44/151, 29%). Almost 15% (22/151) cited return to work as the reason and one wanted to start ABA breast-feeding counsellor training. Seven percent indicated that they were dissatisfied with their experience (10/151) and 19% chose the 'Other' option. The most frequent 'Other' responses were related to increased work/ study commitments (9/29) (*I was feeling stressed trying to balance this among my return work and family commitments*). Responses also included uncertainty about whether they were doing 'a good job' (6/29 responses) (*I don't think I have the personality/skill set to be a volunteer mother*).

### **Volunteers' views on the value of the peer support programme**

Volunteers were given a list of statements regarding their perception of the value of the peer support programme and asked to respond to on a five-point scale with responses ranging from *'strongly disagree'* to *'strongly agree'*. The volunteers agreed that telephone support for breast-feeding was valued by women (125/142, 88%) and that the RUBY programme would be effective in helping women to breastfeed (132/143, 93%). Most volunteers would recommend the type of telephone support provided in the RUBY study to new mothers (133/144, 93%).



## Discussion

The RUBY trial demonstrated that proactive telephone peer support in the postnatal period was effective in reducing the risk of stopping breast-feeding before 6 months postpartum in a high-income setting such as Australia<sup>(10)</sup>. Understanding the experience of volunteers who provided the peer support intervention is important for upscaling and sustainability of similar programmes. We found that volunteers were highly motivated to support new mothers and described the role as personally rewarding and enjoyable. This paper focuses on the experience of volunteers. The experiences of mothers who received the peer support intervention were very positive and have been reported elsewhere<sup>(10)</sup>, with more detailed data currently being analysed for reporting in forthcoming papers.

### **Motivation to volunteer**

In this study, there was strong interest in the peer support role, mainly from mothers whose most recent experience of breast-feeding was within the previous 2 years. Almost all were motivated because the role enabled them to act upon strong beliefs in the value of supporting breast-feeding and to engage socially with new mothers. Motivations such as feeling compassion towards and helping new mothers navigate the challenges of early breast-feeding (values motivation), and social motivations have been previously linked to interpersonal volunteering, such as providing peer support<sup>(31)</sup>. It has also been suggested that a volunteer's feelings about an organisation or sense of affiliation may be an important factor in participation<sup>(32,33)</sup>. The extent to which our collaboration with the Australian Breastfeeding Association (ABA) influenced volunteers' decision to participate was not explored. However, we did notice increased interest from potential volunteers following exposure on ABA social media platforms.

### **Preparation and support for the role**

Those developing peer support programmes must decide the extent to which peers will be trained for the role. Extensive training may increase a peer's knowledge to that of para-professional and diminish 'peer' support<sup>(18)</sup>. This study used a 4-h training session which was perceived as adequate by most volunteers; however, nearly one-third would have liked ongoing training whilst participating. The call for ongoing training has been made by previous studies of the experiences of peer supporters<sup>(17,18,25,34)</sup>. It may be that peers are seeking not only additional knowledge but also reassurance and connection with other peers<sup>(19)</sup>. Training of peers is an important consideration in terms of sustainability of programmes as it is a recurrent expense and time commitment. Based on our findings, extending the duration of training is not warranted prior to commencing the peer support role, but opportunities

for further education during their participation would be valued by some peers.

Volunteers valued the support provided by regular contact from the volunteer coordinator. Regular contact supports the integrity of the intervention, assists peers to overcome challenges<sup>(35)</sup> and highlights necessary changes to the programme. Opportunities for social interaction enabled volunteers to share their stories, both related to the peer support role, but also their own experience of motherhood. Social connection with other volunteers has been suggested as important in previous studies<sup>(19)</sup>, but in this study, few volunteers attended planned social events. Uptake may have been greater if social events had a specific educational focus related to the role given the volunteers' request for ongoing training.

### **The frequency and timing of calls**

Proactive peer support programmes usually have a protocol for the timing of contacts which may range from 'less intensive' (<5 planned contacts) to 'intensive' (≥12 planned contacts)<sup>(36)</sup>. However, the nature of the intervention necessitates that it be responsive to the needs of both recipient and provider. Although most volunteers in this study reported following the call schedule 'most of the time', many commented that 'it depends on the mother' and her need for support. The intensity of the intervention may have a bearing on its effectiveness and a balance must be struck between flexibility and effectiveness. In a systematic review of peer support for breast-feeding continuation, Jolly *et al.*<sup>(36)</sup> reported that ≥5 planned contacts reduced the risk of not breast-feeding at follow-up. This is consistent with the RUBY study in which the mothers received an average of six calls<sup>(10)</sup>. The approach to the frequency and timing of calls in this study is consistent with what Trickey *et al.*<sup>(13)</sup> describe as 'a negotiated proactive' model of peer support where a minimum number of calls is specified whilst allowing the number of calls beyond that to be tailored to the mother's needs.

### **The personal impact of providing support**

Volunteers reported a high level of satisfaction and identified positively with the peer support role. Positive aspects of their experience reflected pro-social values including expression of empathy, altruism and social connectedness. Volunteering has been widely reported to increase self-esteem, self-efficacy and social connectedness<sup>(37,38)</sup>, and sharing experiences may offer therapeutic benefits to the peer<sup>(17)</sup>.

Volunteer satisfaction was assessed from a retrospective 'global' view when volunteers ceased participation and may have been reflective of the volunteers' optimal relationship(s). More nuanced findings may be achieved if volunteer satisfaction is assessed at the end of individual peer relationships. We used a single measure of satisfaction; however, multidimensional measures have also been





proposed<sup>(39)</sup>. One such measure expands the overall construct of volunteer satisfaction to include motive satisfaction, satisfaction with the task and satisfaction with volunteer management<sup>(40)</sup>. Satisfaction alone is not the only predictor of volunteering duration and needs to be considered in relation to the volunteer's intended period of service<sup>(40)</sup>. Although the experience of volunteering is likely to alter the duration, regardless of intention, examining the intended duration in comparison to the actual duration of service may in itself be a proxy measure of satisfaction.

### **Challenges with the role**

Alongside high levels of satisfaction, volunteers identified two main challenges that reflect generic issues associated with telephone support interventions: initiating and maintaining contact and communicating effectively with people from linguistically diverse backgrounds. In this study, despite screening for English language proficiency during a face-to-face recruitment of mothers by a research midwife, a small number of volunteers commented about difficulty with telephone communication. Unlike face-to-face peer support where communication is enhanced by non-verbal cues, telephone communication may pose more challenges. Whilst this does not seem to have had a significant impact overall, it does need to be considered when screening women if volunteers are only English speaking.

### **Retention of volunteers**

Despite increasing interest in peer support programmes, funding is often limited and may undermine service provision<sup>(41)</sup>. Retaining volunteers reduces training and recruitment costs for programme organisers. Encouraging volunteers to complete at least one period of support and if they choose to cease participation, to do so at the end of a support period decreases disruption to mother/peer relationships. Previous studies of breast-feeding peers have reported that although providing breast-feeding peer support was rewarding, participation was not sustained due to changed personal circumstances<sup>(34)</sup>, including return to paid work. A similar pattern was observed in the RUBY study. We enabled volunteers to defer participation during busy times in their lives (e.g. following the birth of a child), and this was a useful strategy. However, return to paid employment was frequently given as a reason to cease volunteering, due to time constraints. Return to work may have also enabled volunteers to re-establish workplace social connections, reducing the need to seek such connections through volunteering.

These findings relate to data collected within an RCT, and volunteers in this context may have had different motivations from those who volunteer in other settings. However, the RUBY study was a pragmatic trial, and delivery of the intervention was responsive to the needs of volunteers and recipients. Consequently, the experience of providing proactive telephone peer support described here

is likely to be relevant to peer support programmes in other settings. A limitation is that the views expressed by volunteers who responded to the survey may not be representative of those who did not respond. The extent to which non-responders had a more positive or negative experience is unable to be determined.

### **Conclusion**

The RUBY trial demonstrated that proactive telephone peer support reduced the risk of stopping breast-feeding before 6 months postpartum in a high-income setting<sup>(10)</sup>. This study highlights the acceptability of the peer support role to the volunteers providing the RUBY intervention. Almost all volunteers were motivated because the role resonated with their belief in the value of breast-feeding support and enabled them to engage socially with new mothers. A high level of satisfaction and positive identity with the role were reported. Volunteers shared valuable experiential knowledge and felt adequately prepared after attending a 4-h training session. Opportunities for additional training after starting the role would be valued by some volunteers. A recommendation for those designing call schedules for future programmes would be to specify a minimum number of calls based on previous research, and tailoring the number of calls beyond that, to the mother's needs. The results presented here give insights into the experiences of peer volunteers in the RUBY trial are important in terms of potential sustainability and upscaling of similar programmes.

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laid down in the Declaration of Helsinki and all procedures involving research study participants were approved by the La Trobe University (12-08), the Royal Women's Hospital (12/25), Sunshine Hospital (HREC/12.WH/107) and Monash Medical Centre (12251B) and was registered with the Australian and New Zealand Clinical Trials Registry (ACTRN12612001024831). Written informed consent was obtained from all study participants.

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### ***Forthcoming chapter***

The following chapter (**Chapter 9**) explores the experiences of the peer volunteers providing telephone support in the RUBY study in more depth than was possible with the RUBY Volunteer Experiences survey. It includes a manuscript published in the journal *PLoS One*.

## **Chapter 9    Breastfeeding peer support by telephone in the RUBY randomised controlled trial: a qualitative exploration of volunteers' experiences (Component 3)**

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This chapter presents findings from Component 3 of the study and comprises the findings from analysis of data generated from four focus groups with volunteers who had supported at least one mother in the RUBY RCT. Following a discussion of the aim of Component 3, along with the rationale, data collection and analysis methods used in this component, a published manuscript is provided.

### **AIM OF COMPONENT 3**

The aim of this aspect of the study was to explore the experiences of the peer volunteers providing telephone support in the RUBY study in more depth than was possible with the RUBY Volunteer Experiences survey (Component 2, page 107).

### **RESEARCH QUESTIONS ADDRESSED IN COMPONENT 3**

The aims of this component were to:

- explore the factors that motivated volunteers to participate in the RUBY RCT;
- explore the volunteers' views on their preparation for the role of RUBY volunteer;
- explore the experience of providing peer support including challenges; and
- understand the positive and negative impact providing telephone peer support had on the volunteers.

## RATIONALE FOR CHOICE OF DESIGN FOR COMPONENT 3

A qualitative component was added to the study to obtain a more comprehensive view of the peers' experiences and to obtain insights that may not have been apparent in the quantitative data. The decision to use focus groups as a method of data collection arose from the candidate's observation of RUBY volunteer interactions during social get-togethers, which were facilitated by members of the research team. At these events, volunteers were relaxed and during group discussions, provided rich descriptions of their peer support experiences. Focus groups were considered to offer several advantages. More than a means to simply gather accounts from individuals, focus group offer an opportunity to set up 'a negotiation of meanings through intra- and inter-personal debates' (Cook & Crang 1995 in Liamputtong, 2011, p. 4) and therefore generate not only individual, but also collective views related to the issue under investigation. Furthermore, group settings such as focus groups are considered less threatening to many research participants compared with individual interviews (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009). However, group dynamics can present challenges, such as participant concerns about confidentiality and some participants feeling inhibited by more dominant group members (Davidson, Halcomb, & Gholizadeh, 2017).

## INCLUSION CRITERIA

All volunteers (n = 230) who provided peer support to at least one mother in the RUBY study were invited by email to attend a focus group at the Royal Woman's hospital, Melbourne, Australia between October 2015 and March 2016. Participants were familiar with the venue, having attended an initial RUBY training session there. They were informed that participation was voluntary.

## DATA COLLECTION PROCESSES

Four focus groups were conducted between November 2015 and March 2016. Of the 230 email invitations sent, there were 53 responses. Nineteen volunteers replied that they were unable to attend. The main reasons given for not attending was return to paid

work and lack of childcare. The remaining 34 volunteers who responded indicated that they would be interested in attending a focus group.

The focus groups were semi-structured, and a question guide was developed to address the research questions (**Appendix Q**). Six questions were asked that were broadly categorized to explore 'antecedents' (*'Can you recall what prompted you to volunteer for RUBY?'; 'What was your expectation of the role?'*), 'experiences' (*'Can you tell me some of the reasons you continued to support mothers for as long as you did?'; 'Can you tell us about the support you provided to the mothers you were allocated?'; 'Do you have any comments about the training session you attended before you started in the role?'*) and 'consequences' (*'Can you tell me about how the experience of volunteering was for you personally?'*). At the conclusion of each focus group, participants were given the opportunity to add any other comments (*'Do any of you have anything at all that you would like to add?'*).

Prior to commencing each focus group, each participant provided written consent (**Appendix R**). The focus groups lasted for approximately one hour and were facilitated by either the chief investigator on the RUBY RCT or a co-investigator. All facilitators were experienced qualitative researchers who had conducted focus group interviews in previous studies. The facilitators had also done extensive research in the fields of postnatal care and breastfeeding support. The candidate, who was the RUBY volunteer coordinator, attended the first focus group. However, the research team considered that the presence of the volunteer coordinator may inhibit the comments made by the volunteers, particularly in relation to the support they received during the study. It was decided that the volunteer coordinator would not participate in subsequent groups.

## **Recording and transcription**

All focus groups were audio-recorded with consent of the participants. The focus group discussions were transcribed in their entirety, verbatim, by the candidate, to generate data for analysis (Liamputtong, 2011). A consistent syntax developed a priori, was used during transcription (Liamputtong, 2011). For example, () indicated the transcriber

couldn't hear what is being said; words were written in capital letters to indicate increased volume/ emphasis and red italics indicated interjection of less than 2-3 words by another speaker. The complete recording was checked for overall quality prior to transcription. Transcribing took place in blocks of 10–15-minute intervals to enable thorough checking of the text against the original recording. The transcripts were verified by a second member of the research team (HAM).

An associate researcher also attended the focus group to observe and take 'field notes'. These notes included the order in which participant spoke during the interview and the first few words of each person's contribution so the statements could be correctly attributed during transcription. The verbal and non-verbal notes recorded as field notes during the focus group were reflected in the final transcript. Field notes were added to the transcripts in parenthesis.

## **Data analysis**

The focus groups were exploratory, and the aim was to conduct an analysis that would maximise the emergence of key themes related to our study question. Data were analysed using a hybrid approach to thematic analysis that combined inductive and deductive technique (Fereday & Muir-Cochrane, 2006). A coding schema was developed a priori that aligned with the aims of the study and this directed initial categorisation of data. The categories included the motivations to volunteer, the nature of the support, and negative and positive aspects of providing support.

Each complete transcript was read, and audio recordings listened to in order to get an overall impression of the content. The candidate then examined the transcripts line by line, and highlighted text related to the key questions. During this process, the candidate was sensitive to emerging themes that may have not been captured in the coding schema; the coding schema was modified accordingly. In an iterative process, the highlighted text was re-examined and coded.



One of the candidate's PhD supervisors (HMc) reviewed the codes and following an in-depth discussion, some codes were combined whereas others were split into subcategories. To maximise the exclusivity of categories and subcategories, each was examined and explicitly described. The candidate and all supervisors discussed the final categories and compared them with the content of the transcripts. The essence of each subcategory was illustrated by quotations identified and extracted verbatim from the data. Quotations were de-identified. Data saturation was achieved after four focus groups.

## REPRESENTATIVENESS OF FOCUS GROUP PARTICIPANTS IN COMPARISON WITH OVERALL VOLUNTEER COHORT

The overall cohort who provided peer support to at least one mother comprised 230 women. Of those, 154 completed the survey anonymously and 17 participated in the focus groups (**Table 4**). The women who attended the focus group were similar to those who completed the survey on a number of characteristics including income and level of education. Data related to these variables were not collected from the overall volunteer cohort. The mean age of women who attended the focus groups was higher compared with the overall cohort (37 years Vs 34 years). They were also more likely to have two or more children compared to the overall cohort (13/17, 76% Vs 110/230, 48%). The proportion of women born in a country other than Australia was higher in the focus group participants (5/17, 29% Vs 41/230, 18% in the overall cohort). The focus group participants supported more mothers compared to the overall cohort and survey respondents (a mean of 4 mothers compared to 2 mothers).

**Table 4:** Comparison of focus group participants characteristics with all RUBY volunteers and those who completed survey

Characteristic	All volunteers who supported at least one mother (Component 1) n = 230		Volunteer survey respondents (Component 2) n = 154		Focus group attendees (Component 3) n = 17	
		%		%		%
<b>Age (n = 230, 145, 17)*</b>						
18–25 years	3	1	2	<1	0	0
26–34 years	125	54	79	55	4	24
≥ 35 years	102	44	64	44	13	76
Mean age years, (SD)	34	(5)	35	(5)	37	(4)
<b>Country of birth (n = 230, 144, 17)*</b>						
Australia	189	82	118	82	12	71
<b>English first language (n = N/A, 143, 17)*</b>	N/A		137	96	14	88
<b>Partnered (n = N/A, 145, 17)**</b>	N/A		135	93	16	94
<b>Income (n = N/A, 142, 16)*</b>						
Less than \$999 per week (less than \$51,999 per year)	N/A		22	16	2	13
\$1000–\$1999 per week (\$52,000–\$103,999 per year)			60	42	7	44
More than \$2000 per week (\$104,000 or more per year)			60	42	7	44

Characteristic	All volunteers who supported at least one mother (Component 1) n = 230		Volunteer survey respondents (Component 2) n = 154		Focus group attendees (Component 3) n = 17	
		%		%		%
<b>Education</b> (n = N/A, 145, 17)*						
Completed a Degree or higher	N/A		119	82	13	76
<b>Current employment**</b>						
Employed full-time	N/A		19	13	2	12
Employed part-time			78	54	6	35
Maternity leave			23	16	4	24
Home duties			43	30	5	29
Student (full or part-time)			17	12	0	0
Self-employed			5	<1	0	0
<b>Number of children</b> (n = 230, 145, 17)*						
One child	120	52	58	40	4	24
Two children	85	37	69	48	11	65
More than two children	25	11	18	12	2	12
<b>Average age youngest child (mean)</b> (months)	17 (SD 27)		30 (SD 37)		18 (SD 12)	
<b>Number of mothers each peer supported in RUBY RCT (mean)</b>	2 (range 1-11)		2 (range 1-11)		4 (range 1-10)	

\* Where denominator varies in any variable the denominator of each item is added here

\*\* Respondents could select more than one option

## CANDIDATE CONTRIBUTION TO PEER REVIEWED PAPER INCLUDED BELOW

I declare that I have made a substantial contribution to this paper, including contributing to the overall study design. I undertook data management and analysis, with the support of my supervision team and drafted the paper. The co-authors all contributed to the overall study design, intellectual input, and editing of the manuscript. My contribution to this paper included data collection, preparing data for analysis, data analysis and interpretation. I also drafted the manuscript and contributed revisions.

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The candidate's contribution to this manuscript was approximately 70%.	
Candidate:	Date: 27 <sup>th</sup> October 2021
Principal supervisor:	Date: 27 <sup>th</sup> October 2021

RESEARCH ARTICLE

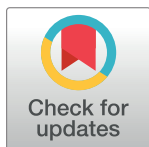
# Breastfeeding peer support by telephone in the RUBY randomised controlled trial: A qualitative exploration of volunteers' experiences

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## Abstract

### Background

There is growing evidence that peer support programs may be effective in supporting breastfeeding mothers. A randomised controlled trial (RCT) (the RUBY study) that tested peer support in the Australian context found that infants of first-time mothers who received proactive telephone peer support were more likely to be receiving breastmilk at six months of age.

### Methods

This qualitative sub-study of the RUBY RCT explores the experiences and views of peer volunteers who delivered the intervention. Focus groups were conducted with 17 peers from the RUBY RCT between November 2015 and March 2016. All had provided peer support to at least one mother.

### Results

We found that volunteers identified strongly with the mothers' need for support when establishing breastfeeding. Key components of the support were strengthening the mothers' self-belief through affirmation and sharing experiential knowledge. Volunteers found the role rewarding and personally therapeutic although some women reported challenges initiating and maintaining contact with some mothers. Data were analysed using a hybrid approach to thematic analysis combining inductive and deductive techniques

### Conclusions

Breastfeeding peer support programs are reliant on recruitment of motivated volunteers who can provide empathetic mother-to-mother support. This study provides important

information regarding volunteers' experiences that may support the upscaling of breastfeeding peer support for new mothers.

## Trial registration

Australian New Zealand Clinical Trials Registry, ACTRN 12612001024831.

## Introduction

Women who breastfeed possess experiential and embodied knowledge that has the potential to benefit new breastfeeding mothers and extend the duration of breastfeeding [1]. Lack of support has been identified as a reason for early breastfeeding cessation [2] and in societies in which women are isolated from breastfeeding role models [2] formal breastfeeding peer support programs present opportunities to share this valuable resource [1].

A Cochrane review comparing interventions providing extra support for breastfeeding mothers reported that compared to professional support, support provided by non-professionals reduced the risk of mothers not exclusively breastfeeding their babies to six months age [3].

Breastfeeding peer support has the potential to address gaps in support that make women vulnerable to early cessation of breastfeeding [1, 3–7]. A systematic review of 17 randomised controlled trials (RCTs)—with a meta-regression of 15—found peer support was more effective in reducing the risk of non-exclusive breastfeeding in low and middle income countries compared to high income countries and when delivered at high intensity ( $\geq 5$  contacts) compared to low intensity ( $< 5$  contacts) [7]. The Ringing Up about Breastfeeding EARLY (RUBY) trial was an Australian RCT which evaluated the effectiveness of breastfeeding peer support by telephone and found that providing first time mothers with telephone-based support from a peer with at least six months personal breastfeeding experience was positively associated with higher breastfeeding maintenance at six months postpartum (75% giving breast milk in the intervention group Vs 69% in the control group; Adjusted risk ratio 1.10; 95% CI 1.02, 1.18) [8]. This is significant as previously, few interventions have been identified that increase breastfeeding duration in high income settings [7]. This article reports the findings from a sub-study of the RUBY RCT—the perspectives of the volunteers who provided the support.

Peer support roles are highly variable and embedded in programs with considerable heterogeneity [9]. Peers may be volunteers or remunerated and the experience they share with recipients may be as diverse as diabetes management, overcoming substance abuse, living with a mental illness or establishing breastfeeding. Method of delivery may be face to face, via web-based modalities or by telephone. A systematic review of seven RCTs assessing the evidence for telephone peer support interventions in health contexts, included three studies that reported on peer volunteers views and experiences [10]. The three studies [6, 11, 12] all reported qualitative data. The key themes emerging from the review were that peers needed to feel that they were helping recipients of support and while they valued sharing their personal experiences, they were sometimes confronted by the feelings that emerged including recollection of painful experiences and anxiety [10].

A qualitative meta-synthesis of 34 studies reporting the experiences of peers providing face-to-face support in the health context included five studies related to breastfeeding peer support [9]. Of those, one reported on postnatal telephone peer support [6] and the remainder reported interventions delivered in a variety of clinical and community settings [4, 13–15]. The study found that the peer support role enabled peers to reframe their identity through

support relationships and secondly, the role constituted a 'therapeutic use of self' [9]. These constructs may evoke benefits or challenges for the peers. For example, sharing personal stories is potentially therapeutic for both recipient and peer. However, such benefits depend on achieving positive engagement and a sense of reciprocity within the relationship [9].

Providing peer support may confer benefits to peers including increased self-esteem and increased social-connection and potentially mitigates pre-existing feelings of isolation [6, 9, 16]. Frustration may arise however, when establishing and maintaining contact with recipients [17] and a perceived lack of engagement by recipients can be discouraging [9, 13]. Furthermore, it has been reported that volunteers in breastfeeding peer support programs may not participate for extended periods [18] which presents challenges in terms of ongoing recruitment and training. Defining boundaries between peer and professional breastfeeding support may require attention if the two are closely linked [15]. Findings from previous studies suggest that volunteers need ongoing support from supervisors to remain engaged and for quality assurance of programs [9, 10, 19].

Despite increased interest in peer support interventions, limited attention has been given to the experience of breastfeeding peer supporters. In addition, given the diversity of peer support programs, findings may not be generalisable across all contexts. In view of the success of the RUBY peer support model in extending the duration of breastfeeding, important questions arise in terms of what attracts volunteers to the role, the personal impact of providing support and their own needs for support. The aims of this study were to explore the experience of volunteers providing peer support to increase understanding of volunteers' motivation for becoming peer supporters, and to describe their perceptions and experiences, in order to understand factors that may impact the duration of participation.

## The RUBY trial

The RUBY study was a two arm multi-site RCT that aimed to determine whether proactive peer support, provided in the postnatal period by telephone, increased the proportion of infants who were breastfed for at least six months. Further details of the RUBY trial can be found in the published protocol [20] and primary outcomes paper [8].

Between February 2013 and December 2015, 1152 primiparous women were recruited from three public hospitals in the state of Victoria, Australia during their postpartum hospital stay. Women were randomly allocated to usual care or telephone peer support in addition to usual care via a computerised system of randomisation designed and administered by an external party, accessed via the internet.

Volunteers who had breastfed for at least six months and were not considered professionals (and having previously had less than 8 hours of breastfeeding training) were recruited and trained to provide proactive telephone support to new mothers. Recruitment commenced in December 2012 and the final training session took place on May 2015. A total of 246 women completed the four-hour peer training session and 230 supported at least one mother. During training, an Australian Breastfeeding Association facilitator discussed normal infant behaviour, effective communication, existing resources, and sociodemographic factors that impact infant feeding.

Following allocation of a new mother, peers received the mother's first name, phone number, baby's date of birth and gender. Peers initiated calls to the mother at four to six days postpartum. Weekly calls were made for 12 weeks and contact tapered off to monthly calls until six months postpartum. Call frequency was adjusted if requested by the mother. Peers offered support with breastfeeding and general adjustment to parenthood, and directed women to existing local services as required [20].



## Methods

### Study design

We used a qualitative descriptive design [21] informed by the functional theory of volunteerism which provided a conceptual framework for interpreting data related to the motivation to volunteer [22]. Volunteering may be motivated by a desire to fulfil six functions which include a desire to express important personal *values*, to seek experiences to enhance skills or *understanding*, to form social connections or to enhance *career* prospects. Volunteering may also serve a *protective* function that offers a distraction from personal problems and finally, volunteer roles may serve an *enhancement* function that leads to a more positive self-appraisal [22].

### Data collection

All volunteers who provided support to at least one mother (n = 230) were invited by email to participate in a focus group between October 2015 and March 2016. A focus group guide was specifically developed to explore the issues thought to impact the volunteers and to elucidate their personal experience of providing support. Issues identified from relevant research literature, including the functional approach to volunteering, and collaborative discussion between the researchers informed the final interview guide [22]. Broadly, it explored (i) the reasons women chose to be a peer supporter; (ii) the type of support they provided; and (iii) their overall experience of volunteering.

Following each focus group, preliminary data analysis was undertaken, and the interview guide was reviewed in light of emerging themes. Two additional questions related to the volunteers' experience of cultural diversity and its impact on the relationship they had with the mothers, as well as issues that arose related to establishing peer support boundaries were added after the first focus group.

Two researchers from the RUBY research team attended each focus group. Data collected were entered into a password protected Access database and hardcopies stored securely. The first author (HAG) transcribed and de-identified the recordings and the final transcripts were read independently by two researchers (HAG, HLM) and checked against the audio recordings.

### Data analysis

Data were analysed using a hybrid approach to thematic analysis that combined inductive and deductive techniques [23]. A coding schema was developed, *a priori* that aligned with the aims of the study and this directed initial categorisation of data. The categories included the motivations to volunteer, the nature of the support, and negative and positive aspects of providing support.

### Rigour

Methodological rigour was addressed using several strategies. The focus groups were facilitated by a chief investigator on the RUBY RCT who was experienced in qualitative methods. An associate researcher wrote field notes, and these were discussed with the facilitator immediately afterwards to check for consistency and interpretation of events. The transcripts were de-identified for analysis and individual participants were identified with the focus group and participant number (e.g. FG1, participant 3). This method identifies all quotes extracted verbatim from the data that were used to illustrate themes in this manuscript. The first author examined the transcripts line by line, and highlighted text related to the predetermined categories and new categories that emerged. The text was then re-examined and coded. HLM reviewed

the codes independently and after discussion with HAG, codes were further refined and emerging themes identified. This was an iterative process. All authors participated in a final discussion and checking of themes to ensure they represented plausible findings from the original transcripts. An audit trail was maintained for each successive iteration of analysis.

## Ethics

Ethics approval for the RUBY RCT was obtained from the following Human Research Ethics Committees (reference number in brackets): Royal Women's Hospital (12/25); La Trobe University (12–082); Monash Health (12251B); and Western Health (12/WH/107). Eligible women were recruited by research midwives during their postnatal hospital stay at one of the trial sites. Those who agreed to participate provided written consent prior to randomisation.

Volunteers who provided peer support to at least one woman and who responded to our invitation to participate in a focus group, were informed that participation was voluntary and were sent a participant information pack and consent form to read prior to attending. Facilitators collected the signed consent forms prior to commencing each focus group.

## Results

Four focus groups were conducted between November 2015 and March 2016, each lasting approximately 60 minutes. Data saturation and the study objectives were met following the fourth focus group when no new themes emerged [24].

## Participants

Of the 230 email invitations to participate, 34 peers responded and 17 participated. The main reasons given for not participating were return to paid work and lack of childcare. The demographic characteristics of participants are presented in [Table 1](#).

Focus group participants were allocated a total of 66 mothers for peer support in the RUBY study, with an average of four mothers each (range 1–10). Their experiences ranged from never establishing contact with the mother (8/66, 12%) through to providing six months of support (28/66, 42%).

The focus of this study was the participants' motivations to volunteer, the nature of the support they provided, and the positive and negative aspects of the role. Several themes were identified under each area of exploration. Key themes that emerged from the data are summarised in [Table 2](#).

## Motivation to participate in the program

In relation to volunteers' motivation to become peer supporters, the main themes to emerge were '*new mothers need breastfeeding support*', '*giving back*', and '*flexibility of the role*'.

**'New mothers need breastfeeding support'**. A strong theme was the volunteers' insight and understanding that new mothers need breastfeeding support. All volunteers referred to their own breastfeeding experience and the adequacy of the support they received. They highlighted the importance of support to overcoming challenges and described how feelings of loneliness and isolation exacerbated difficulties. They talked about the way in which new mothers may mask their struggles during this period in the face of '*so much pressure to look like you're actually managing it when most people aren't*.' (FG3, participant 1). One mother recalled that she '*didn't really have support when (she) first had the baby and was feeling very isolated*' (FG1, participant 1) and another observed that '*It's quite lonely as a parent. . . We*

**Table 1. Participant characteristics (n = 17).**

Characteristic	Number (n = 17)
<b>Age, years</b>	
30–34	4
35–39	9
40+	4
Mean years, (SD)	37.1 (4.2)
<b>Country of birth</b>	
Australia	12
England	1
South Korea	1
United States of America	1
New Zealand	1
Argentina	1
<b>English first language (n = 16)</b>	14
<b>Partnered</b>	16
<b>Income (n = 16)</b>	
\$350 - \$649 per week (\$18,200 - \$33,799 per year)	1
\$650–\$999 per week (\$33,800–\$51,999 per year)	1
\$1400–\$1999 per week (\$72,800–\$103,999 per year)	7
More than \$2000 per week (\$104,000 or more per year)	7
<b>Education</b>	
Completed a Degree or higher	13
Completed Diploma or certificate	3
Completed secondary school to Year 12 (or equivalent)	1
<b>Current employment</b>	
Employed full-time	2
Employed part-time	6
Maternity leave	4
Home duties	5
<b>Usual occupation</b>	
Education/ teaching	4
Health professional	3
Professional—other	3
Administration and/or management	3
'Stay at home' mother	2
Other	2
<b>Average number of children</b>	2 children
<b>Average age youngest child</b> (months) (range 4–48)	18 (SD 12)

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*have probably all experienced that. And just to be able to have that connection with another mum is helpful*'. (FG1, participant 2).

Many recounted that they did not know who to trust for support or correct advice, and they valued support from other breastfeeding mothers. Family members may not have breastfed or could not recall the challenges. One volunteer commented that she '*had family support and all that, but they didn't understand the difficulties*' (FG2, participant 1). Some volunteers received care from health professionals who they perceived lacked training in breastfeeding support. Peer support was viewed as a means of filling in information gaps:

Table 2. Themes and subthemes.

Area explored	Themes	Sub-themes
Motivation to participate in the program	Women need breastfeeding support	<i>Empathy with mothers' personal journey;</i>
		<i>Volunteers' own experience of breastfeeding support;</i>
		<i>Breastfeeding can be isolating</i>
		<i>Inconsistent or lack of breastfeeding support</i>
	Giving back	<i>Gratitude for support received when breastfeeding;</i> <i>'Paying forward'</i>
Type of support provided	Building trust/ rapport	<i>The role wouldn't be too demanding.</i>
		<i>A good fit with other commitments</i>
		<i>Developing a relationship over time</i>
	Providing affirmation	<i>Developing rapport</i>
		<i>Listening to their story</i>
		<i>Affirming normal infant behaviour</i>
	Providing information	<i>Promoting realistic expectations</i>
		<i>Buffering against stress</i>
		<i>Sharing the experience of motherhood;</i> <i>Sharing information</i>
Personal impact of providing support	Personal benefits for the volunteers	<i>Sharing information</i>
		<i>A therapeutic experience;</i>
		<i>Boosted my self-esteem;</i> <i>It feels good to help others</i>
	Contact challenges	<i>Anxiety about making the calls</i>
		<i>Frustration with unanswered calls;</i>
		<i>Disappointment when women didn't engage with support</i>
	Cultural and linguistic challenges	<i>Language barriers</i>
		<i>Anxiety about lack of specific cultural knowledge</i> <i>Opportunities to learn from CALD* mothers</i>

\* Women from culturally and linguistically diverse backgrounds.

<https://doi.org/10.1371/journal.pone.0237190.t002>

*'I felt really hesitant saying "Go to your GP [general practitioner]" because they... are highly unlikely to know anything about breastfeeding'. (FG3, participant 1)*

A key motivation for women to volunteer related to a deep, personal, empathetic awareness that women need support to breastfeed and that for some women, this may be lacking.

**'Giving back'.** Volunteers expressed gratitude for the positive support they received when establishing breastfeeding, and saw this as something valuable to share with others. Volunteers talked about *'looking for some way of giving back'* the support they had received. When volunteers could not directly reciprocate support received, they described *'paying forward'* the support to others:

*'It's nothing out of my time, just looking out for someone else, and I think of that person that helped me. I just thought '... I can't pay her back, but I can help someone else. Pay it forward.'* (FG1, participant 2)

**'Flexibility of the role'.** For many women being a telephone peer supporter enabled them to support mothers without interfering with their own family responsibilities or necessitating extensive training. The majority of mothers commenced volunteering when they were on

maternity leave from paid employment, and the flexibility of the role was something they could fit in around their family commitments:

*'I just thought it was a good thing to do and it wasn't too time consuming in terms of I didn't have to go anywhere. I had a training session and I could do it on the phone.'* (FG1, participant 2)

Thus the nature of the role enabled volunteers to support mothers whilst being compatible with their own/personal commitments.

### Type of support provided

Volunteers were asked about the support they provided to the mothers. Key themes to emerge were 'building trust/rapport', 'providing reassurance and/or affirmation', 'providing information' and 'providing more than breastfeeding support'.

**'Building trust/ rapport'.** The RUBY volunteers proactively telephoned mothers for up to six months after their baby was born. The initial calls were mostly an introduction and initiating the relationship:

*'Making friends with the mums and winning their trust initially. Like "Congratulations, how's it going"...kind of establishing that rapport...Trying to make that first initial contact...was the most tricky thing. Once that happened and I spoke to the woman, it was like holding her hand through the process.'* (FG3, participant 2)

Providing ongoing support to the same mother helped to build a relationship and increased the level of trust as they got to know each other. Fundamental to developing the trust required to build the relationship was actively listening to the mothers and hearing their story:

*'You do need to have the conversation without distraction so the person on the other end of the phone feels like they're being listened to and they are being heard.'* (FG4, participant 1)

The relationships varied in intensity from brief exchanges, to friendships that extended beyond the period of support. Some volunteers were sad when the period of support ended and would have liked to maintain the relationship:

*'The mums who go the whole distance [six months], you generally have a lovely relationship by the end. It's almost a bit sad saying "Well this is my last phone call" and it seems a bit strange.'* (FG2, participant 2)

**'Providing affirmation'.** Through personal experience, volunteers were aware that new mothers may encounter stressors during the transition to motherhood, and that their ability to cope can be hampered by exhaustion and managing their own physical recovery. Volunteers were unable to directly alter the mother's circumstances, but could reappraise the situation and in some cases assist in '*...giving them a different perspective from what they had*' (FG3, participant 3) and reassurance when things were 'normal':

*'You just want someone to listen to you, someone to say, "This is absolutely normal" and you know, "You are doing a good job".'* (FG1, participant 1)

The volunteers recognised that they could potentially undermine a mother's confidence and felt it was important to reassure the mother that she was doing a good job:

*'If your mum is already questioning everything she's doing, you don't want to seem like you know it all, and "this is how I did it and this is how it has to be".' (FG1, participant 3)*

Several volunteers identified that mothers were vulnerable to criticism from friends and families, who did not always support breastfeeding. This could be expressed by negative comments or by uninformed opinions. Volunteers viewed peer support as a buffer against some of the stress caused by struggling to breastfeed within an unsupportive social environment. One volunteer described how *'You're basically coming in and being a little voice in their home that they can talk to. They can admit things to you that they can't admit to a family who's judging and being negative about what they are doing.'* (FG1, participant 1)

**'Providing information'.** Through their own breastfeeding experiences and those shared amongst their social network, volunteers possessed embodied and experiential knowledge that they could share with mothers. This ranged from giving specific advice and assisting with problem solving, to providing information about resources, or suggesting referrals that may be useful to the mother:

*'Just having the experience and advice that I'd had and being able to translate that to real life support in a non-judgemental and non-directive manner, was nicely rewarding for me and I think for them as well.'* (FG1, participant 3)

The training session included advice about the boundary between peer and professional support. Focus group participants stated the type of support wanted by some of the mothers was not necessarily 'professional' support but support from another mother who had similar experiences: *'they. . .didn't want professional help, they wanted to talk to me and get my experience.'* (FG2, participant 3)

## Personal impact of providing peer support

We asked volunteers to describe their experience of volunteering and any personal impacts. The main themes derived from the responses were *'personal benefits for the volunteers'*, *'contact challenges'* and *'cultural and linguistic challenges'*.

**Personal benefits for the volunteers.** The volunteers identified a number of personal benefits that they had derived from volunteering in the program. One volunteer described the experience as being therapeutic in that it helped her to come to terms with her own negative experiences when establishing breastfeeding. The role helped them to reflect on their own experiences and in some cases, gain perspective on what they had been through:

*'A lot of mums have trouble breastfeeding and . . . there can be a lot of mental damage done. I think doing this helps us reconcile some of that stuff ourselves. . .that what happened to me is in the past. Maybe if I help and listen to another mum, I'm perhaps giving her what I maybe didn't get, or would have wanted more of.'* (FG1, participant 2)

Some women enjoyed the feeling of participating in something they considered worthwhile beyond their current role as a parent, reducing feelings of isolation, which were still quite real for some volunteers. Overall volunteers described increased feelings of self-worth gained from providing peer support:

*'I've really enjoyed it. You know those days when your children are not the angels that you'd like them to be and you're just doing boring thing after boring thing? It's so nice to have a phone call with somebody you have actually helped, done something that was useful for somebody, because I'm a full-time mum at the moment, and my self-esteem is just a little low.'* (FG3, participant 1)

There was a strong sense of satisfaction derived from helping another mother, especially if the outcome was positive:

*'I've gotten a lot out of it because I've had some really good experiences with mums continuing breastfeeding so I feel like my time has been valued, you know putting in, and they've gotten something out of it.'* (FG1, participant 1)

**Contact challenges.** Making the first phone contact was sometimes a stressful and/or exciting time for some peers. Volunteers were passionate and committed to providing support, but some described feeling apprehensive making the first call. They were unsure of the response they would get from the mother, or whether they would be able to provide the required support. This anxiety usually soon subsided with subsequent calls:

*'I just didn't know what sort of response I was going to get from the other end of the phone with the first. Not necessarily so much with the consequent mothers, but certainly with the first.'* (FG4, participant 1)

Some volunteers were personally disappointed if the mothers did not respond to the first or subsequent calls and became concerned about what was happening with the mother:

*'I really worried about the women I couldn't support, especially the first one, it was my first time doing it . . . and I know it's ridiculous, but I felt anxious, "Oh God, has something really bad happened?"'* (FG3, participant 2)

When the mother ended the period of support early or didn't respond to calls, some of the peers reflected on it in a personal way. Strategies used for dealing with these situations included reframing the experience and acknowledging the mothers' decisions about participation in the program:

*'The first mum I did really take it personally. Like "What have I done?" But then I thought about it and like none of my friends breastfed their kids past 2 weeks. I've helped these mums like to at least a month. I just turned it around.'* (FG2, participant 1)

**Cultural and linguistic challenges.** Volunteers reported challenges when supporting women from culturally and linguistically diverse (CALD) backgrounds. The mothers were screened for English proficiency, however some volunteers had difficulty in understanding mothers with very strong accents. The lack of visual cues available during phone contact contributed to the problem:

*'Her accent, in person would have been perfectly fine, but over the phone it was difficult. We managed to talk, but it was too hard to have a full conversation.'* (FG2, participant 1)

Lack of knowledge about the diversity in cultural practices in relation to infant feeding and broader postpartum practices caused some anxiety amongst peers. They were concerned about



causing offence by saying the wrong thing, and expressed apprehension about providing advice that may conflict with that given by respected family members:

*'I know one of the mother's mother was constantly telling her to formula feed. And I know that was a cultural thing. It's just the way it is done, they always formula fed . . . It was very hard to get past that.'* (FG3, participant 3)

One volunteer questioned whether coming from different cultural backgrounds limited her capacity to be an empathetic peer to the CALD mothers supported:

*'Can you truly be a peer if you come from a different cultural background? I think the strength [of peer support] is that you can empathise with all the stuff that goes on behind breastfeeding and having a baby. . . If you're coming from a very different cultural perspective, can you truly be on exactly the same level playing field?'* (FG3, participant 2)

This generated discussion and another volunteer concluded that although sociodemographic differences existed between her and her peer mother, the shared experience of motherhood gave them common ground:

*'I'm a lot older than most of the women I spoke to and I also suspect I've got a lot more education than all of them too, and . . . you're constantly negotiating those differences. I kept trying to come back to "What does it feel like to be a mum for the first time?" Because in that you really are stripped of a lot of your. . . worldly signifiers.'* (FG3, participant 1)

## Discussion

The RUBY trial demonstrated that proactive peer support by telephone in the postnatal setting increased the number of infants receiving breastmilk at six months of age. Given the significance of the findings it is important to explore the experiences of the peer volunteers. This qualitative study took place in the final months of the RCT, before the primary study outcome was known. A qualitative component was included to enhance understanding of how the intervention was implemented and to explore factors that might impact scaling up of the program [25]. This study sheds light on the acceptability of the intervention to those providing support and findings suggest that peers found the role rewarding, and experienced mutual benefit from sharing their breastfeeding experiences. They reported challenges in initiating and maintaining contact, and communication difficulties with culturally and linguistically diverse women and this study highlights the importance of providing ongoing support to peer support volunteers.

The functional theory of volunteerism provided a conceptual framework to guide the interpretation of the peers' motivation to volunteer [22]. A number of motives were identified although a strong sense of breastfeeding advocacy and concern for the plight of new mothers emerged as most important. This is consistent with the values function described in the volunteer functional inventory [22]. Participants viewed breastfeeding as a positive health behaviour that mattered to the well-being of mothers and infants.

In this study, volunteers described how the role was personally therapeutic and, in some instances, resolved negative feelings related to their own experiences of breastfeeding. These findings are supported by several studies that report that sharing challenging experiences in the course of peer relationships may confer mutual benefits by enabling validation and reframing of personal stories and a subsequent sense of closure [9, 16, 17]. Volunteering has been



widely reported to increase self-esteem, self-efficacy and social connectedness [15] and for mothers with childcare responsibilities, social interaction may combat the isolation associated with early motherhood [4]. A peer support project for mothers of preterm infants found that issues could arise if peers have unresolved emotions related to their own experiences and a 12-month period between the peers' experience and undertaking a peer support role has been suggested [26]. Those issues were not apparent in this breastfeeding study although all volunteers have been breastfeeding for at least six months.

Peers viewed the support they provided as unique and grounded in their direct experience of breastfeeding rather than a substitute for professional support. Whilst health professionals are important providers of breastfeeding support and information, the volunteers' personal experiences led them to conclude that this was not always reliable. Studies have reported substantial gaps in knowledge and skills related to breastfeeding amongst health professionals [27] and this may have a negative impact on women trying to overcome breastfeeding challenges. Women have also reported feeling less rushed when receiving support from peers compared to health professionals [28]. This study supports the view that peer support is unique and although some elements overlap with health professional support, it fulfils different needs for breastfeeding mothers.

Volunteers reported that ongoing contact with the same mother enabled trust and rapport to develop. Engaging recipients during initial contacts and developing ongoing rapport is crucial to sustaining relationships [6] and achieving 'authentic presence' with mothers [28]. When peers perceive that calls are appreciated, there are compounded benefits in that they may give more attention to relationships that are valued by the recipient [29]. Programs enabling ongoing contact between individual peers and recipients foster relationships that may be more satisfying for peers.

In instances where peers and mothers were culturally diverse, we found that if English skills were sufficient for adequate telephone communication, a successful peer relationship could be established. It is not surprising, however, that this study confirms previous findings that language barriers can have a negative impact on the provision of peer support [6, 13, 17]. The extent to which the peer relationship can successfully navigate cultural differences *per se* and find 'common ground' in the shared experience of motherhood is less clear. Greenwood and Habbi [30] suggest that in a crisis, people learn effective coping strategies from those who have been in comparable situations. Focusing on the mutual experience of breastfeeding during interactions as a means of identifying 'common ground' may assist in sustaining the relationship. Sociodemographic diversity can also be framed as an opportunity to share valuable and mutually beneficial cultural and language insights [31].

Peer relationships are not without stressors and at times volunteers had concerns about aspects of the role. As found in previous studies, pragmatic challenges in contacting recipients and uncertainty that arises if contact isn't made, can impact on peer morale [13]. Providing support by telephone avoided issues associated with face to face contacts such as travel pressures [32]. Regular contact from a peer support coordinator promotes ongoing peer engagement and provides guidance and support of peers who face challenges [18]. In addition, ongoing contact supports quality assurance of peer programs by promoting adherence to intervention guidelines [9, 19] and leads to decreased attrition rates [26].

## Strengths and limitations

There is limited in-depth, qualitative research focused on the experience of volunteers who provide breastfeeding peer support. Focus groups provided an opportunity to elicit more detail about volunteers' personal experiences of providing peer support than would have been

possible by survey alone. Volunteers with diverse peer support experiences in terms of the duration of support and number of women supported provided a range of views. Those who attended may have been more satisfied with their experience or more motivated about peer support than those who did not participate. Consequently, the views expressed may not be those of all volunteers.

## Conclusion

The volunteers in this study demonstrated an empathetic understanding and commitment to help breastfeeding mothers, gained through their own personal experience. Providing peer support was largely a positive experience that provided psychosocial benefits to volunteers. Challenges related to difficulties initiating and maintaining contact, and language barriers. The findings of this study support previous research that highlights the need for volunteer peer supporters to receive regular support from program coordinators to help them navigate challenges that may arise.

Despite volunteers describing the role in mostly positive terms, further studies could help to identify modifiable factors that extend the duration of volunteers' participation.

The findings suggest the peer support role offers mothers the opportunity to share valuable breastfeeding knowledge and encouragement to new mothers within a relationship that may be mutually beneficial. In addition, by highlighting aspects of the volunteers' experience that may support recruitment and management of peers, these findings support the sustainability of the peer support model offered within a study context. The RUBY trial demonstrated that volunteer peer support is one of few strategies to increase breastfeeding duration. In view of this, and the acceptability of the volunteer peer support role reported in this study, research translation activities within community settings are warranted.

## Supporting information

**S1 File. RUBY volunteer focus group questions.**  
(DOCX)

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### ***Forthcoming chapter***

**Chapter 9** concluded by offering insights into the motivations and experiences of volunteers providing peer support in the RUBY RCT. The chapter presented a publication, findings of which were based on data collected during focus groups and analysed using qualitative methods. The next chapter (**Chapter 10**) will present a discussion and summary of the research findings of this thesis. The discussion will encompass implementation of the RUBY peer support intervention, and the experiences and motivations of peer volunteers. Potential directions for future research are also provided.

## Chapter 10 Discussion and recommendations

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The three components of this thesis were undertaken in the context of the RUBY randomised controlled trial and are brought together in this final chapter. Prior to discussing the overall findings of this thesis, the aims and research questions will be revisited.

### Aims of this thesis

The overarching aim of this thesis was to explore and understand key factors in the implementation of the peer support intervention used in the RUBY randomised controlled trial (RCT), to inform future upscaling and sustainability of proactive telephone breastfeeding peer support models. The research questions were:

- What factors contributed to successful implementation of the RUBY intervention?
- What are the characteristics of the RUBY volunteers and can an understanding of these characteristics inform future peer support programs?
- What were the motivations and experiences of volunteers providing the intervention?

To explore these issues the thesis included three components:

**Component 1:** A process evaluation using a mixed methods approach to explore salient aspects of the delivery of the RUBY intervention with a focus on intervention fidelity, and secondly, the recruitment, training, and support of those providing peer support. Findings reported in **Chapter 7**.

**Component 2:** A survey of volunteers providing telephone-based peer support within the RUBY RCT to explore their motivations and experiences, and to identify issues that may impact sustainability and future implementation of comparable peer support interventions. Findings reported in **Chapter 8**.

**Component 3:** A qualitative study exploring the experiences of the peer volunteers providing telephone support in the RUBY study in more depth. Findings reported in **Chapter 9**.

This study used a convergent parallel mixed methods design (Creswell & Creswell, 2017). Both quantitative and qualitative data were collected simultaneously and analysed separately. The findings were published separately (see Chapters 7 to 9). The point of convergence of the findings is here, in this final chapter.

## REFLECTIONS ON THEORETICAL APPROACHES USED

Social engagement and sharing of experiential knowledge are at the heart of peer support relationships. The RUBY peer support intervention provided an opportunity for women to share their experiential and embodied breastfeeding knowledge with new mothers, to help them overcome challenges faced during the first six months of breastfeeding. The volunteers in this study perceived recipients valued the intervention (**Chapter 7**) and volunteers would recommend this type of support to new mothers. At the training session, volunteers frequently talked about their desire to ‘pass on’ to a new mother, what they had learnt from their own breastfeeding experiences. Borkman’s theory of experiential knowledge underpins peer support interventions (Salzer, 2002; Borkman, 1990 in Solomon, 2004) and was a useful theoretical approach to consider here, as it suggests an individual’s experience of a phenomenon (‘experiential knowledge’) undergoes further synthesis to enable it to be transformed into a level of competence that can be shared with others (‘experiential expertise’). This is a key consideration when designing peer support training programs in which peers are encouraged to reflect on their attitudes toward their experiences, and how these attitudes might impact the peer relationship.

Interventions such as peer support assist mothers to overcome challenges by increasing their understanding of a stressor, normalising the situation, and supporting her to mobilise her personal resources or to guide her toward specific resources (Dennis, 2002). Peer support is an asset-based approach to breastfeeding support which helps to strengthen a woman’s capacity to manage physiological and social challenges associated

with infant feeding (Ingram et al., 2020). Viewing breastfeeding peer support through a salutogenic lens shifts the focus from a problem-centred approach requiring 'specialised' support, to a more woman-centred approach that taps into her own network of support and directs her to available community supports (Mathias, Davis, & Ferguson, 2021). This approach focuses on practical solutions to problems, identification of resources to improve health and increasing an individual's sense of coherence, or the belief 'that one's internal and external environments are predictable, and that there is a high probability that things will work out as well as can reasonably be expected' (Antonovsky, 1979, p. 123).

### **Efficacy of proactive breastfeeding peer support delivered by telephone**

The RUBY trial was based on the proactive telephone peer support intervention used in a Canadian trial (Dennis et al., 2002). Dennis et al., (2002) reported a significant difference in the proportion of women undertaking any breastfeeding when their infant was aged three months compared to those receiving usual care; 81% compared with 67% in the control group, with no evidence of adverse effects. Findings from the RUBY study supported this positive intervention effect, with more infants of women assigned to proactive telephone peer support in the RUBY RCT receiving any breast milk at six months of age, compared to women assigned to receive usual care (**Appendix A**).

Given the success of the RUBY intervention in increasing breastfeeding duration in the Australian context, examining what was actually delivered and the impact it had on the peers is important to enable replication and future upscaling of the intervention by those seeking to establish a peer support model outside the bounds of a RCT (Hoffmann et al., 2014; Schulz et al., 2010). In relation to breastfeeding peer support, there has been a call to provide details about who delivered it, how it was delivered, the intensity of the support, and whether it was proactive or reactive (McFadden et al., 2017). This issue is particularly relevant when designing interventions that have wide heterogeneity, as is the case for peer support RCTs (McFadden et al., 2017).



## **The RUBY RCT: Intervention fidelity and intervention dose**

Intervention fidelity has been defined as the extent to which an intervention is delivered as intended and is an important consideration when assessing the internal and external validity of a study (Linnan & Steckler, 2002). Internal validity may be threatened if an intervention is not delivered as planned, as the extent to which the intervention led to study outcomes, becomes unclear (Allen, Shelton, Emmons, & Linnan, 2017; Bellg et al., 2004). Additionally, external validity may be negatively impacted as replication of an intervention that has drifted significantly from protocols, is almost impossible (Allen et al., 2017). On the other hand, it is acknowledged that in increasing internal validity by tightly controlling intervention delivery, the generalisability of the findings when the intervention is delivered in 'real world' settings may diminish (Allen et al., 2017).

RUBY was a pragmatic study which aimed to achieve a balance between fidelity to the planned intervention, and adaptation to the needs of recipients, thus ensuring it could be replicated in 'real world' conditions. Debate exists regarding the extent to which an intervention must adhere to intervention delivery protocols, versus adaptations made to make the intervention a better 'fit' in a given context (Moore et al., 2015). Craig et al., (2013) highlight the need to be clear about how much adaptation has taken place to enable accurate assessment of fidelity. Implementation fidelity was measured in the RUBY study using a range of techniques, including Call Logs maintained by peers, questionnaires focused on the peer's experience and notes maintained by the volunteer coordinator (**Chapter 7**).

Proactive peer support programs usually have a protocol for the timing of contacts which may range from 'less intensive' (< 5 planned contacts) to 'intensive' (≥12 planned contacts) (Jolly, Ingram, Khan, et al., 2012). However, the nature of the intervention necessitates that it be responsive to the needs of both recipient and provider. If no deviation from the RUBY call schedule had occurred, approximately 15-17 calls between mother/ volunteer pairs would have taken place across the six-month period of support. Although most volunteers in this study reported following the call schedule 'most of the time', many commented that 'it depends on the mother' and her need for support (**Chapter 8**). Based on Call Log data provided by the peers, it was ascertained the mean

time to the first telephone contact with the mother was seven days after birth (sd 4.4 days) and each mother received six calls on average (**Chapter 3**). One third of the relationships lasted the full six months, and 11% of women chose not to engage with their allocated peer volunteer at all (**Chapter 3**). Call numbers increased in line with the duration of support, and if support continued for 20 weeks or more (which applied to 34% of mother-peer dyads), a median of 11 calls were received. This flexible approach is consistent with what Trickey et al., (2018) described as ‘a negotiated proactive’ model of peer support where a minimum number of calls is specified whilst allowing the number of calls beyond that to be tailored to the mother’s needs. The next section of this chapter will look beyond efficacy and temporal aspects of the intervention and discuss the motivations and salient characteristics of the volunteers in the RUBY RCT.

## MOTIVATIONS AND SALIENT CHARACTERISTICS OF THOSE WHO PROVIDED BREASTFEEDING PEER SUPPORT

Early work in this study focused on targeting recruitment messages aimed at volunteers that would resonate with their motivations to participate. To this end, the functional approach to volunteer motivations (Clary et al., 1998) was explored along with the validated volunteer functional inventory (VFI) which was modified and used in data collection. On reflection, the ease of recruitment of volunteers to this study obviated the need to revise our initial recruitment strategy. The functional approach to volunteering provided a useful framework for examining the motivations of participants using both survey and focus groups. Almost all were motivated because the role enabled them to act upon strong beliefs in the value of supporting breastfeeding and to engage socially with new mothers (**Chapter 7** and **Chapter 8**). The career function didn’t appear to be significant to the RUBY volunteers, possibly because volunteers were ineligible if they were undertaking or had undertaken formal breastfeeding education. Motivations such as feeling compassion toward, and helping new mothers navigate the challenges of early breastfeeding, and social motivations have been previously linked to interpersonal volunteering, such as providing peer support (Maki & Snyder, 2017).

Over a third of volunteers were members of the ABA at the time of enrolment and most had recent and extended breastfeeding experience (**Chapter 7**). Many had breastfed for considerably longer than the pre-requisite six months, with the average reported duration of a volunteer's longest breastfeeding experience being nearly 16 months. The majority had breastfed within two years of expressing interest in participating as a peer volunteer in the RUBY study. Most breastfeeding peer support studies specify peers must have personal breastfeeding experience. At least six months of experience (as in the RUBY study) is the most common pre-requisite (Brownson & Heisler, 2009; Chapman et al., 2004; Reeder et al., 2014), with variations ranging from a minimum of four weeks (Di Meglio et al., 2010), to three (McInnes & Stone, 2001) and 12 months breastfeeding experience (Haider, Chang, Bolton, Gold, & Olson, 2014). In a systematic review of 17 trials on breastfeeding peer support, Jolly et al., (2012) reported that the length of breastfeeding experience is frequently unspecified.

Whilst the relevance of the duration of the peers' own breastfeeding experience is unclear, it has been reported that mothers who provide breastfeeding support, have usually breastfed for much longer than the socio-cultural 'norm' of their communities. As such, these breastfeeding supporters have been considered 'positive deviants' in relation to their breastfeeding outcomes (Gross et al., 2017; Tawia et al., 2019). Characteristics ascribed to this group include believing strongly in the importance of breastfeeding and personally experiencing positive breastfeeding support from their partners. Providing peer support to women who had already indicated an intention to breastfeed and had consented to be a part of the RUBY study may have been perceived by volunteers as a safer platform to promote breastfeeding than within their immediate social group. Some volunteers may feel that it is too risky to openly promote breastfeeding in their own social context as it may be considered 'alternative' to the prevailing social norms (Tawia et al., 2019). Given the central role of experiential knowledge to peer support studies, further consideration of the peers' breastfeeding experience in relation to recruitment and delivery of interventions is warranted and may emerge as a relevant factor to overall program success.

## THE TRAINING PROGRAM AND SUPPORT OF PEERS

Peer support programs provide training to peers that varies considerably in structure and duration across different programs. Training of peers is an important consideration in terms of sustainability of programs as it is a recurrent expense and time commitment. Those developing peer support programs must decide the extent to which peers will be trained for the role. There is a risk that extensive training of peers may modify the support they provide to that of a paraprofessional (Dennis, 2003a) or educator (Jolly, Ingram, Freemantle, et al., 2012).

The four-hour RUBY training session was significantly shorter than that described by other breastfeeding peer support programs, many of which offer 20 to 30 hours of training (Trickey et al., 2018). Overall, the RUBY peers considered the training session adequate preparation prior to commencing the role, although nearly one third would have liked ongoing training whilst participating (**Chapter 8**). The call from peers for regular ongoing training sessions has been made in previous studies (Dennis, 2002, 2013; Hopper & Skirton, 2016; Pistrang, Jay, Gessler, & Barker, 2013). It may be that peers are seeking not only additional knowledge, but also reassurance and connection with other peers (MacLellan, Surey, Abubakar, & Stagg, 2015).

Peer training aims to optimise communication skills, and this is particularly crucial for those programs delivered via telephone, where non-verbal cues are not apparent. During the RUBY training session, specific interpersonal skills such as adopting a non-judgemental attitude and active listening were practised using role-play and group discussion. The RUBY training session also provided an opportunity to screen participants' communication skills by observing their interaction with the group. Whilst the training session focused on developing communication skills such as active listening and positive language, the volunteers were informally screened for adequate fluency in English to enable effective telephone communication, and attention was also given to the attitudes they demonstrated in group discussions. Breastfeeding peer support requires a balance between breastfeeding promotion and respecting a woman's personal infant feeding goals (Leeming, Williamson, Johnson, & Lyttle, 2015; Thomson &

Trickey, 2013). Whilst direct observation may not expose all undesirable communication habits, it may highlight 'red flags' such as overbearing attitudes, intolerance of contrary views, and speaking disrespectfully to other group members.

Peers in this study supported new mothers via telephone in a one-to-one relationship anticipated to extend for six months postpartum. During this period, the RUBY volunteer coordinator maintained regular email or phone contact and responded to contacts initiated by the volunteers. Supporting peers throughout their participation is as important as their initial training and assisting them to navigate challenges also supports the integrity and sustainability of the intervention (Biggs, McLachlan, Shafiei, Small, & Forster, 2019; Fisher et al., 2014). Support from a program coordinator has been perceived as positive in previous studies (Dale et al., 2009; Dennis, 2013; Dennis et al., 2002). Support may take the form of regular group meetings with peers, telephone or email contact or newsletters reporting program outcomes and offering encouragement (Dennis, 2014). Opportunities for social interaction were also provided to enable volunteers to share their stories, both related to the peer support role, but also their own experience of motherhood. Social connection with other volunteers has been suggested as important in previous studies (MacLellan et al., 2015), but in this study few volunteers attended planned social events.

Overall, volunteers felt well supported while undertaking the peer support role. There were occasions where changes in their personal circumstances, such as return to work and pregnancy, prevented participation. Many volunteers in the RUBY study cited return to paid employment as the reason they stopped volunteering. Previous research has reported that volunteers become increasingly time poor when work and caring responsibilities increase (Kappelides & Johnson, 2020). To increase retention of volunteers, RUBY volunteers were able to defer participation during busy times in their lives (for example following the birth of a child). This was a useful strategy and several volunteers returned to the role after childbirth or after they had navigated their initial return to work. We asked peers to time their deferral, where possible, so it coincided with the end of a period of support, thus minimising disruption for the support recipient.

## THE VOLUNTEERS' EXPERIENCES OF PROVIDING SUPPORT

A key focus of this study was to examine the personal positive and negative impacts on volunteers providing the RUBY intervention. The volunteers reported a high level of satisfaction and identified positively with the peer support role (**Chapter 8**). They were highly motivated to support new mothers and described the role as personally rewarding and enjoyable. Volunteers also reported feeling as though participation enabled them to come to terms with their own breastfeeding experiences, some of which had been negative. The therapeutic effect of sharing experiences and stories within peer support relationships has been previously reported (Pistrang et al., 2013; van de Ven, 2020). There is the potential for peers to be able to reframe their negative experiences and by doing so, gain a new perspective (van de Ven, 2020). As one volunteer described:

*A lot of mums have trouble breastfeeding and ... there can be a lot of mental damage done. I think doing this helps us reconcile some of that stuff ourselves...that what happened to me is in the past. Maybe if I help and listen to another mum, I'm perhaps giving her what I maybe didn't get, or would have wanted more of. (FG1, participant 2) (Chapter 8)*

Volunteering has been widely reported to increase self-esteem, self-efficacy and social connectedness (Brown, Hoyer, & Nicholson, 2012; Ingram, 2013). Overall, RUBY volunteers described increased feelings of self-worth gained through participation in the study. This may have been brought about by contributing to something they considered worthwhile beyond their current role as a parent and by reducing feelings of isolation, which were still quite real for some volunteers. For the most part, when volunteers commenced the role, they were on maternity leave from paid employment, and didn't find the role disruptive.

Volunteers in the RUBY study identified two main challenges encountered during their role as peer supporters. These were communicating effectively with women from linguistically diverse backgrounds and initiating and maintaining contact with recipients. These challenges were not specific to the model used in the RUBY RCT, and reflect

generic issues associated with telephone support interventions (Dennis & Kingston, 2008; Fisher, Tang, et al., 2018). In this study, despite research midwives screening mothers for English language proficiency during face-to-face recruitment, a small number of volunteers commented about difficulty with telephone communication. Telephone communication lacks the non-verbal cues that enhance face-to-face peer support and while this issue didn't seem to have had a significant impact overall, some volunteers, especially during the focus groups, experienced frustration in these situations. However, in cases where peers and mothers were culturally diverse, if the mother's English skills were sufficient for adequate telephone communication, a successful peer relationship was established. Matching peers to mothers based on language has been attempted in previous peer support studies (Trickey et al., 2018), but was not feasible in the RUBY study.

The RUBY study demonstrated improved breastfeeding outcomes for women who received the proactive peer support intervention and the intervention was received positively by mothers (McLardie-Hore et al., 2020). All planned peer/recipient contacts in the RUBY study were proactive and despite being encouraged to do so, very few mothers initiated contact during the period when they were receiving peer support. It was the proactive aspect of the intervention that sometimes negatively impacted peer volunteers, as they had to reach out and initiate contact with mothers. Difficulty making contact with recipients and the uncertainty that arises, can have a negative impact on peer morale (Murphy et al., 2008). Some RUBY peers found making the first call 'uncomfortable' and reported feeling apprehensive about how the calls would be perceived by the mother (**Chapter 9**). Having to make repeated attempts at contact potentially increases this discomfort (Dennis, 2002; Di Meglio et al., 2010). In these situations, peers can perceive their help isn't wanted, leading to dissatisfaction with the role (Trickey et al., 2018). Previous studies have also reported peers feeling 'bothersome' when making calls, perceiving non-receptiveness from the mother and feeling disappointment when learning the mother had stopped breastfeeding (Dennis, 2002). Peers can be prepared for these aspects of the role, at least in part by using role play and discussion of specific call scenarios during the training session (**Chapter 7**). From a program perspective it is important to highlight to peers that there is the

potential for lack of engagement by recipients, and to provide reassurance. Within the bounds of the RUBY RCT, recruitment midwives ensured new mothers didn't feel pressured to participate and had a genuine desire to engage. However, despite this, volunteers were unable to establish contact with 11% of RUBY participants (**Chapter 3**). In the real world, outside an RCT, it is likely that peers would encounter non-responsiveness from a higher proportion of women. Assisting peers to overcome these challenges is important to retention of peers and thus, overall sustainability of programs, and further highlights the importance of providing ongoing support to peer support volunteers.

## WHAT DID THE PEERS PROVIDE?

The support provided by peers crosses several domains including appraisal, emotional and informational support (Dennis, 2003a). These are not distinct categories, and a single peer/recipient interaction may comprise all these aspects (Dennis, 2003b). One of peer supports strongest mechanisms of action is the emotional connections and pragmatic insights based on the peers lived experience of the phenomenon (Watson, 2019). Findings from this study identified that RUBY volunteers perceived emotional support to be the main reason mothers valued the calls (**Chapter 7**). The mothers who received the peer support intervention in the RUBY trial also supported this finding and reported receiving high levels of emotional support (McLardie-Hore et al., 2020). In the context of breastfeeding, emotional support relates to expression of empathy and connectedness and is not necessarily only related to infant feeding (Emmott, Page, & Myers, 2020). The importance of emotional aspects of care that reflect an embodied approach to breastfeeding, communicated in accessible language has been highlighted in previous studies (Demirtas, 2012; Ryan, Bissell, & Alexander, 2010; Smale, 2000). Peer training must encompass not only the informational aspects of the role, but also the significant emotional and social elements (Dennis, 2003b; Fisher et al., 2014; Watson, 2019). Unravelling elements of peer support relationships contributes to a better understanding of how such interventions might work. However, a significant limitation to this goal is that peer support is not a single entity, but a dynamic interaction between individuals (Leeming et al., 2015). Fundamentally, peers share the practical knowledge



gained from their own breastfeeding experiences, with a new mother who may be facing challenges in the early weeks of breastfeeding.

### **A unique type of support**

The RUBY peers viewed peer support as unique, and not a substitute for professional support (**Chapter 8**). By using their experiential knowledge and training, peers were able to offer new mothers a range of suggestions and strategies on parenting and infant feeding issues. During the training session the need to support the mother to come to her own decisions, and to refer her to professional support when needed was emphasised to volunteers (Chapters 7, 8 and 9). Previous research has highlighted that within breastfeeding peer support relationships, breastfeeding is normalised and mother-centred support encourages women to take an active role in determining how they overcome breastfeeding challenges (Burns & Schmied, 2017). Women have described valuing ‘authentic presence’ in the context of breastfeeding support, which is characterised by themes such as ‘being there for me’, ‘taking time’, ‘providing affirmation’, ‘sharing the experience’, and ‘having a relationship’ (Schmied, Beake, Sheehan, McCourt, & Dykes, 2011, p. 51). Peer support programs offering continuity are more likely to promote support grounded in ‘authentic presence’, compared with fragmented support offered by multiple peers (Schmied et al., 2011).

### **Support to overcoming stressors**

Many women find breastfeeding to be more difficult than they first anticipated (Hall, McLelland, Gilmour, & Cant, 2014) and challenges faced by mothers when establishing and maintaining breastfeeding are widely reported (Alianmoghaddam, Phibbs, & Benn, 2018; Brown et al., 2014; Newby & Davies, 2016; Odom et al., 2013). In the RUBY RCT, most women in both the control and intervention groups reported experiencing physical difficulties such as problems attaching, low milk supply, painful or cracked nipples and mastitis (**Chapter 3**). The personal support women have available to overcome challenges varies and is a determining factor in breastfeeding maintenance (Emmott et al., 2020). RUBY volunteers viewed the support they provided as a buffer against some of the stress caused by struggling to breastfeed within an unsupportive social

environment. Stressors encountered during the first six months of breastfeeding may trigger 'pivot points' during which a woman may decide to cease or reduce breastfeeding (Hoddinott, Craig, Britten, et al., 2012). Hoddinett et al., (2012) describe potential pivot points as stressors that may be somatic, emotional, social, cultural or environmental in origin. An intense emotional reaction may ensue, during which a change to feeding behaviour may be considered a solution (Hoddinott et al., 2012). Assisting women to persevere through these pivot points may be an important mechanism of action for peer support interventions (**Chapter 3**).

## **Call content**

Examining the content of each call highlights the topics raised by the mother which is useful in determining content of training and ensuring the links to additional resource provided in the RUBY Volunteer Information manual (**Appendix K**) are relevant. Concerns raised by women are likely to change over the course of the first six months and while topics such as 'feed frequency' remain a consistent topic of conversation throughout the duration of support, 'nipple pain/ damage' and 'positioning and attachment' were less likely to be raised when the infants were over three months old (**Chapter 7**). This finding supports previous studies describing changing maternal concerns during the early months of breastfeeding (Demirci & Bogen, 2017). Demirci et al., (2017) reported positioning and attachment, fatigue, feed frequency and pain were common maternal concerns in the first postpartum week, whereas beyond week six to eight, mothers are more likely to identify perceived milk insufficiency, suspected infant reflux, feed frequency and managing breastfeeding upon return to work as concerns. When considered in conjunction with the request from some peers for further training after commencing the role (**Chapter 8**), there is scope for ongoing training to focus on topics raised later in the six-month period of support and the evolving needs of mothers.

High level evidence supports proactive peer support as a strategy to support women to maintain breastfeeding. Findings from this study demonstrate that peer support programs offer a nexus of support between mothers that would not spontaneously occur. The peer relationship has the potential to be mutually beneficial for participants.

However, in a real-world context, both the peer and recipient influence the extent to which the relationship develops. Volunteers who undertake breastfeeding peer support roles are most likely to be women who have breastfed recently. Telephone peer support is reported as rewarding and for some, personally therapeutic. Understanding the motivations of volunteers, their preparation for the role and experiences of providing support is important for those organisations planning to introduce or expand a peer support program.

## CONGRUENCE WITH EXISTING COMMUNITY BREASTFEEDING SUPPORT PROGRAMS

While it has been argued that peer support operates at an individual level and is generally limited to sharing personal experiences (Castro et al., 2019), peer support programs are impacted by factors operating at broader ecological levels, such as background breastfeeding rates, community breastfeeding norms and the provision of community breastfeeding support (Trickey et al., 2018). The challenges faced by those who run programs include access to limited financial support, along with the recruitment, training, and ongoing supervision of peers (Grant et al., 2018). There are important benefits to be obtained by engaging with existing local services with compatible aims when implementing peer support program (Dennis, 2002; Trickey et al., 2018; Watt et al., 2006).

Despite a large potential pool of volunteers being available in Australia (Australian Bureau of Statistics, 2020), the capacity for programs to manage volunteers depends on resources and funding being available to support recruitment, training and management of volunteers, and to employ a volunteer coordinator (Kappelides & Johnson, 2020). The Australian Breastfeeding Association (ABA), the peak community breastfeeding support organisation in Australia, were collaborators on the RUBY RCT. The practical support offered in terms of access to ABA training resources and facilitation of training sessions were crucial to the success of the trial. Engaging with the ABA also provided leverage when recruiting peers, with the most effective method of recruitment being periodic posts on the ABA Facebook page and website (**Chapter 7**). Challenges faced by those

managing volunteer groups have consistently centred around recruitment and retention of volunteers (Kappelides & Johnson, 2020). Previous research has suggested that a volunteer's feelings about an organisation or sense of affiliation may be an important factor in participation (Boezeman & Ellemers, 2013; Butt, Hou, Soomro, & Acquadro Maran, 2017). The extent to which our collaboration with the ABA influenced volunteers' decision to participate wasn't explored. However, there was increased interest from potential volunteers following each exposure on ABA social media platforms (**Chapter 7**).

## STRENGTHS AND LIMITATIONS

The RUBY RCT provides high level evidence that volunteer peer support provided by telephone can improve breastfeeding to six months in primiparous women. There is a relative lack of the peer perspectives in the breastfeeding peer support literature despite growing interest in peer support interventions. There have also been calls to provide more details regarding the implementation of interventions used in RCTs. This study described factors related to recruitment, preparation, and support of volunteers in the RUBY RCT that are relevant to others implementing or scaling up peer support interventions. The study also examined the intervention in relation to fidelity and 'dose' delivered.

RUBY was the first Australian RCT to test the effectiveness and cost effectiveness of proactive peer telephone support for breastfeeding. The RCT was undertaken in a setting of high breastfeeding initiation and in which women had access to a range of breastfeeding supports. The recruitment of peers with at least six months breastfeeding experience could be more challenging in settings with lower breastfeeding initiation. If a similar study were undertaken in the context of lower breastfeeding initiation rates and fewer community supports, outcomes may be different. It is unclear whether background breastfeeding rates impact the experiences of peers providing breastfeeding support.

This mixed-methods study comprised three components. The quantitative data were mostly self-reported data by RUBY volunteers. Data collection tools such as the Call Log and online Volunteer Experiences survey were designed to be easy for the volunteers to complete, to maximise response rates. Both tools included several closed-ended questions with options to add free text. Analysing this data provided a snapshot of the interactions between peers and mothers and the experiences of volunteers. In-depth exploration of the interactions that occurred between peers and mothers, or of the motivations and experiences of volunteers was not possible using those methods alone. The addition of a qualitative study strengthened the overall findings related to the peers' motivations and experiences. In addition, the data related to the intervention implementation process and fidelity were collected during the trial, and different data sources were used. This supports scale up and replication of the RUBY model of peer support.

An important consideration when interpreting and generalising findings about the volunteers' experiences of providing peer support is that findings are derived only from those peers who engaged with data collection. Therefore, as pointed out in previous reviews of peer support, it is possible that a lack of evidence for negative outcomes for peers does not mean they do not occur (Eysenbach et al., 2004; Pistrang et al., 2013). A limitation of this study is the absence of the experiences and challenges of those volunteers who did not respond to the volunteer survey. Approximately one third of volunteers did not respond to the survey, and just over one third of Call Logs were not returned. The online survey was completed anonymously, so it is not possible to determine if women who did not return Call Logs are also in the group who did not complete the survey. The findings of this study may have been different if the views and experiences of all volunteers were represented. As such, the potential for sample bias must be considered when generalising these findings. It may be that volunteers who did not respond experienced more challenges or had poorer personal outcomes from the role compared with those who engaged with data collection.

Finally, the study findings relate to a cohort of volunteers undertaking a peer support role within the bounds of a randomised controlled trial. As such, the role was time limited, and this may have attracted volunteers who planned to participate for a limited period, such as the duration of their maternity leave from paid employment.

Recruitment may be more challenging beyond the context of an RCT.

## RECOMMENDATIONS AND FURTHER RESEARCH

The Australian National Breastfeeding Strategy: 2019 and beyond (COAG Health Council, 2019) recognises the role of community peer support in improving breastfeeding duration. While telephone-based volunteer peer support programs such as the RUBY intervention potentially offer accessible and low-cost support for new mothers, supportive infrastructure is required to enable them to operate efficiently.

Working with an organisation such as the ABA to trial a proactive breastfeeding peer support program would offer considerable practical benefits in terms of access to resources and increasing the reach of the program. In the RUBY RCT, advertising the peer volunteer role on the ABA online platforms was effective, and the association with a well-known organisation may have offered some credibility. The volunteer coordinator role is pivotal to recruiting, training, and supporting volunteers. In the RUBY study, the role encompassed maintaining a database of available peers, recording which mothers they were supporting, making regular contact with the peers, and being a central contact point for any volunteer concerns. As such, funding the role of volunteer coordinator is crucial to meeting the needs of both the volunteers and overall program.

Following recruitment of peers, a second critical step in breastfeeding peer support programs is linking peers with new mothers. Within the bounds of the RUBY study, this was achieved by recruiting mothers in the postnatal units of participating hospitals and the supporting role of the volunteer coordinator. Scale up of a similar program would need to consider barriers to linking mothers and peers in the early postnatal period such as ambivalence of health professionals regarding the value of peer support and ineffective referral pathways (Trickey et al., 2018). For successful implementation, organisations considering a proactive program like RUBY would need a collaborative partnership with maternal and child health services, such as that offered by the Maternal and Child Health Service located in the Australian state of Victoria.

Recruitment of peer volunteers may be more challenging in a real-world context. Participation in the RUBY program may have been appealing to volunteers because requirements and expectations were explicitly described. Peers were informed from the outset that the minimum duration of participation would ideally be six months. The call schedule clearly outlined what was expected in terms of calls and the volunteer coordinator provided regular proactive and reactive support to peers. The boundaries of the role were clear; peers were not expected to have face-to-face contact with the recipients due to the nature of intervention (telephone support). It is recommended that future programs consider presenting volunteers with a coherent understanding of what is required of them, the duration of participation expected and the support available to them, as was done in this study and as was positively received. This approach is consistent with evidence that turnover of volunteers is increased when roles are ambiguous, or expected outcomes poorly defined (Harp, Scherer, & Allen, 2017).

Further research into retention of breastfeeding peers is warranted. RUBY volunteers were enthusiastic about the role at recruitment, and most reported positive outcomes. Future research could focus further attention on the duration of participation in the role, and the reasons for leaving. Many RUBY volunteers were on maternity leave when they commenced volunteering. The importance of factors such as recency of breastfeeding experience, having space created by a break from paid work or seeking purpose or social contact could be explored.

The RUBY program provided an initial training session for volunteers with follow-up support from a volunteer coordinator. Some of the volunteers would have liked the opportunity to attend further training sessions during their participation. The challenges reported by some peers when undertaking the peer support role such as apprehension about proactively calling women and receiving no response or withdrawal of engagement from the mother could be addressed at such sessions. In addition, interpersonal skills that enable the volunteer to gain confidence in responding to situations they have found difficult could be explored. An important benefit of planning



for ongoing training sessions is the opportunity it provides for addressing aspects of the role that may not have been accounted for during initial planning.

Australia is a multicultural society and health services, such as the sites where women were recruited to the RUBY study, provide care to women who speak many different languages and come from diverse backgrounds. For example, the Royal Women's Hospital in Melbourne provides care to women representing 91 different languages and who come from 188 regions across the globe (The Royal Women's Hospital, 2021). For practical reasons, non-English-speaking women, or women with very limited English, were excluded from this study. The acceptability of the telephone peer support role to women from culturally and linguistically diverse communities cannot be assumed from these study findings and further research is required to test peer support amongst these groups.

## CONCLUSION

This study highlights the acceptability of the peer support role to the volunteers providing the RUBY intervention. Almost all volunteers were motivated because the role resonated with their belief in the value of breastfeeding support and enabled them to engage socially with new mothers. Volunteers shared valuable experiential knowledge and felt adequately prepared after attending a four-hour training session.

The findings of the RUBY study are important given how challenging it is to identify interventions that lead to an increase in breastfeeding maintenance especially in a country with high initiation. Upscaling of proactive peer support interventions which provide a source of social support, rely on the capacity of programs to recruit, and maintain a cohort of willing peers, as was achieved in the RUBY study. This thesis explored the experiences of volunteer breastfeeding peer supporters and points to a capacity and willingness for women to support other women in the early months of breastfeeding. In conclusion, this thesis asserts the inherent value of experiential breastfeeding knowledge and the crucial role peer support programs have in increasing breastfeeding maintenance to six months postpartum in primiparous women, and subsequently improving health outcomes for mothers and their infants. Upscaling of proactive peer support interventions relies on the capacity of programs to recruit and maintain a cohort of willing peers. The RUBY study demonstrated that this was achievable within a RCT. This thesis highlights key lessons learned which provide guidance to those planning similar programs beyond an RCT.

And finally, from RUBY peer supporters...

*"...I just like thought how easy it was to do. It's nothing out of my time, just looking out for someone else and I think of that person that helped me. I just thought "God, I can't pay her back, but I can help someone else. Pay it forward"*

*"I really tried to make a point that we're not the professional and made sure I referred them on. And sometimes I felt when I did that, they sort of didn't want that professional help, they wanted to talk to me and get my experience."*

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## Appendix A RUBY RCT protocol

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# **Ringling Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding (RUBY) – trial protocol**

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## Abstract

### Background

The risks of not breastfeeding for mother and infant are well established, yet in Australia, although most women initiate breastfeeding many discontinue breastfeeding altogether and few women *exclusively* breastfeed to six months as recommended by the World Health Organization and Australian health authorities.. We aim to determine whether proactive telephone peer support during the postnatal period increases the proportion of infants who are breastfed at six months, replicating a trial previously found to be effective in Canada.

### Design/methods

A two arm randomised controlled trial will be conducted, recruiting primiparous women who have recently given birth to a live baby, are proficient in English and are breastfeeding or intending to breastfeed. Women will be recruited in the postnatal wards of three hospitals in Melbourne, Australia and will be randomised to peer support or to 'usual' care. All women recruited to the trial will receive usual hospital postnatal care and infant feeding support. For the intervention group, peers will make two telephone calls within the first ten days postpartum, then weekly telephone calls until week twelve, with continued contact until six months postpartum. *Primary aim:* to determine whether postnatal telephone peer support increases the proportion of infants who are breastfed for at least six months. *Hypothesis:* that telephone peer support in the postnatal period will increase the proportion of infants receiving any breast milk at six months by 10% compared with usual care (from 46% to 56%).

Outcome data will be analysed by intention to treat. A supplementary multivariate analysis will be undertaken if there are any baseline differences in the characteristics of women in the two groups which might be associated with the primary outcomes.

### Discussion

The costs and health burdens of not breastfeeding fall disproportionately and increasingly on disadvantaged groups. We have therefore deliberately chosen trial sites which have a high proportion of women from disadvantaged backgrounds. This will be the first Australian randomised controlled trial to test the effectiveness and cost effectiveness of proactive peer telephone support for breastfeeding.

### Trial registration

Australian and New Zealand Clinical Trials Registry ACTRN12612001024831.

## Keywords

Breastfeeding, Exclusive breastfeeding, Breastfeeding rates, Peer support, Telephone, Australia

## Background

The risks of not breastfeeding for both mother and infant are well established, yet in Australia, although most women initiate breastfeeding, many discontinue breastfeeding altogether and few women *exclusively* breastfeed to six months as recommended by the World Health Organization and Australian health authorities [1,2]. Infants who are not breastfed have higher rates of gastrointestinal and respiratory illnesses requiring hospitalisation, are more likely to develop Type 1 diabetes in childhood, and have a higher risk of Sudden Infant Death Syndrome, than breastfed infants [3]. Longer term risks of not breastfeeding include higher mean blood pressure and total cholesterol, obesity, higher risk of Type 2 diabetes and lower performance on intelligence testing [4]. Breastfeeding also has health benefits for the mother [5], including a reduced risk of breast and ovarian cancer compared to women who do not breastfeed [3]. Breastfeeding is cost saving for the family and the community [6,7].

The latest national infant feeding survey in Australia, conducted in 2010, found that 96% of children initiated breastfeeding, however only 15% were exclusively breastfed to six months, with 60% receiving any breast milk at six months [8]. In a randomised controlled trial (RCT) by members of the current research group, only eight percent of infants received exclusively breast milk (no solids and no other fluids) to six months [9].

Breastfeeding initiation rates are closely associated with social class, income and education levels in all countries [10]. In Australia, we have reported the widening gap in breastfeeding rates between more and less advantaged women from the 1990s to 2004/2005 [11]. This gap is also clear in the recent national survey: 74% of infants in the highest income quintile are receiving any breast milk at six months, compared to 50% in the lowest income quintile [8]

Breastfeeding rates in Victoria are similar to overall Australian rates [8,12] and also show marked disparities in the proportion of infants receiving *any* breast milk at six months of age in different Local Government Areas (LGAs) around the state [13]. For example, in one Victorian LGA, 68% of infants received *any* breast milk at six months of age, compared with 32% in another [14], highlighting the breastfeeding inequalities between high and low socioeconomic groups. Victorian perinatal data show that term breastfeeding infants from the most deprived socio-economic quintile were more likely to be given infant formula in hospital (26.5%) compared to infants in the least deprived quintile (20.4%; Relative Risk 1.31, 95% CI 1.2, 1.4) [15].

Many women do not reach their intended breastfeeding duration [16], and in our RCT evaluating the effect of an antenatal education intervention to increase breastfeeding, 54% of women who had ceased breastfeeding prior to six months were unhappy with their length of feeding [17]. In another study, 87% of women who ceased breastfeeding within six weeks of birth would have liked to continue longer [18].

The 2012 Cochrane review of interventions that provided support for breastfeeding mothers divided breastfeeding initiation into high (greater than 80%), intermediate (60 to 80%) and low initiation rates [19]. At the proposed trial sites, the Royal Women's Hospital (the Women's), Monash Medical Centre (MMC), and Sunshine Hospital (SH), audits in 2009 found that 89%, 91% and 91% of infants (respectively) initiated breastfeeding, and exclusive rates of breastfeeding from birth to discharge were 66%, 78% and 68%. While these figures meet the Cochrane review's definition of high initiation [19], all three hospitals have a high proportion of women from relatively disadvantaged backgrounds, and local government data from the catchments of these services show average breastfeeding rates at six months of 35% (range 28 to 42%), 12% lower than the statewide average of 47% [20].

## **Increasing breastfeeding – evidence from systematic reviews**

Evidence on how to maintain breastfeeding in countries such as Australia with intermediate to high breastfeeding initiation is sparse, and most strategies aimed at increasing the duration of breastfeeding have failed. Systematic reviews of strategies to increase breastfeeding have found:

- Antenatal breastfeeding education interventions that increase breastfeeding *initiation* do not increase breastfeeding *duration* as stand-alone strategies [10];
- Breastfeeding promotion interventions may increase breastfeeding in the short term [21], although the increases are generally extremely small, with little significant health impact;
- Breastfeeding education interventions show no association with breastfeeding outcomes [21];
- Extra support (professional *or* lay) increased the duration of breastfeeding (Risk Ratio (RR) for ceasing before six months 0.91; 95% Confidence Interval (CI) 0.88 to 0.96), although there was moderate heterogeneity in included trials; the interventions had a more pronounced effect on exclusive breastfeeding in settings with high breastfeeding initiation [19];
- Lay/peer support interventions increased *any* breastfeeding at six months by 22% (95% CI 8% to 37%), and *exclusive* breastfeeding by 65% (95% CI 3% to 263%) [21]. The Cochrane review found professional and lay support was associated with a positive effect on duration of *any* breastfeeding (RR for stopping any breastfeeding before six months 0.91, 95% CI 0.88 to 0.96) as well as with a positive impact on duration of *exclusive* breastfeeding (RR at six months 0.86, 95% CI 0.82 to 0.91) [19];
- Metaregression analysis of peer support for breastfeeding continuation found that peer support provided solely in the postnatal period was more effective than support provided in both the antenatal and postnatal periods ( $p < 0.001$ ), and more intensive interventions (at least 5 contacts planned) had a greater effect on breastfeeding continuation than lower intensity interventions ( $p = 0.02$ ) [22].

## **The evidence for peer/lay support as a strategy**

“Peer support can be defined as systematic support between two persons or in a group. The participants are regarded as equals . . . A peer supporter is a person who supports breastfeeding, excluding healthcare professionals” [[23] p. 1944 ]. An alternate definition, from Cindy-Lee Dennis states: “Peer support, within the health care context, is the provision of emotional, appraisal, and informational assistance by a created social network member who possesses experiential knowledge of a specific behaviour or stressor and similar

characteristics as the target population, to address a health-related issue of a potentially or actually stressed focal person” [[24] p. 329].

Trials to date of lay (or ‘peer’) support for increasing breastfeeding duration have limited relevance to the Australian context. Those with *positive* results have been mainly in low income countries (Philippines [25], sub-Saharan Africa [26]) and/or countries or communities with low breastfeeding initiation (USA [27-32], Scotland [33]) or high initiation but low exclusivity (Mexico [34], Bangladesh [35]). One trial focused on low birth weight babies in a low income region of Brazil [27]. The results are unlikely to be readily transferable to the Australian context. Other trials did *not* show an effect (in Hong Kong [36], England [37,38] and Scotland [39,40]).

There have been no trials testing peer support for breastfeeding in Australia, and only three internationally that are relevant to our context. An early Canadian trial of telephone support provided by trained volunteers focused on teaching the volunteers about breastfeeding problems, and *had no impact* on breastfeeding duration [41]. An English trial which provided women with access to an existing lay breastfeeding support network was similarly unable to increase breastfeeding duration [37]; although women valued the support they received, the women were unlikely to have been ‘peers’. A Canadian trial implemented *proactive* telephone support by peers who had themselves successfully breastfed (and who were trained to provide support), and achieved a large effect on the proportion of women breastfeeding at three months; 81% compared with 67% in the control group, with no evidence of adverse effects [42].

Breastfeeding is an area of increasing health inequalities, where the costs and health burdens of *not* breastfeeding fall disproportionately (and increasingly) on the more disadvantaged groups [11,43]. The relatively high proportion of women from disadvantaged backgrounds at the proposed sites provide ideal populations in which to trial an intervention to increase breastfeeding.

This will be the first Australian RCT to test the effectiveness and cost effectiveness of a *proactive* approach to peer support for breastfeeding, thus addressing the Cochrane review’s comment that “none of the five studies where women were expected to access support without any proactive element found a difference in outcomes between control and intervention groups” [[19] p.22].

### **How does the proposed model differ from existing mother-to-mother breastfeeding support groups?**

Mother-to-mother support groups such as the Australian Breastfeeding Association and La Leche League International have provided breastfeeding support for new mothers for about fifty years, a factor associated in time with the marked increase in the proportion of women breastfeeding. However, women who join ABA are more likely to be of higher socioeconomic status (J Lumley, unpublished data). Additionally, organisations such as these rely on women actively seeking support themselves. In our previous RCT of breastfeeding [9] conducted at one of the proposed sites (the Women’s), only 30% of women who said they had breastfeeding problems attended a breastfeeding clinic and 7% contacted ABA. In comparison, a concurrent survey of private patients and family birth centre patients at the same site found that 51% of women with breastfeeding problems attended a breastfeeding

clinic and 19% contacted ABA [44]. Women who were public patients were less likely to seek help, especially from existing support groups, than were private patients.

We aim to determine whether peer support, provided during the postnatal period by telephone using a proactive approach, increases the proportion of infants who are breastfed for at least six months.

## **Design**

A two arm RCT is proposed, recruiting women from three Victorian hospitals whose catchments include areas with some of the lowest breastfeeding rates in the state. Women will be randomised to proactive telephone peer support or to ‘usual’ care.

Our primary hypothesis is that peer support provided to women admitted as public patients by telephone in the postnatal period will increase the proportion of infants receiving any breast milk at six months by 10% compared with standard care (from 46% to 56%).

Secondary hypotheses:

Peer support provided by telephone in the postnatal period will:

- a. increase mean breastfeeding duration; and
- b. increase exclusive breastfeeding at six months;

We will also evaluate the interventions from the participant and peer support volunteer perspectives; and evaluate the cost-effectiveness of peer support.

## **Participants**

All eligible women having a baby at the Women’s, MMC and SH during the recruitment period will be offered participation. Women attending these hospitals, although from a wide range of backgrounds, tend to be relatively disadvantaged, with low income and of culturally diverse backgrounds (even among those women who do speak English).

### ***Inclusion criteria***

Women admitted to the postnatal wards as public patients who have had a first live birth; are proficient in English; and breastfeeding or intending to breastfeed.

### ***Exclusion criteria***

Serious illness (e.g. severe pre-eclampsia/eclampsia, significant postpartum haemorrhage, severe psychiatric disturbance, pulmonary embolus); infant remaining in hospital after the mother’s postnatal discharge; multiple birth; mother has chosen to formula feed; or antenatal membership of the Australian Breastfeeding Association (ABA), as this may be associated with a higher breastfeeding intention.

## Usual care

All women recruited to the trial will receive usual hospital postnatal care and infant feeding support. The usual length of hospital stay postpartum is two nights following a vaginal birth and three for caesarean births. All women are eligible for one or more home visits by a hospital midwife in the early postnatal period as well as ongoing support from their local Maternal and Child Health (MCH) nurse. Other support needs to be accessed in a proactive manner by women, e.g. breastfeeding clinics (available at all sites and also available in some local government areas) and ABA.

In the state of Victoria, community-based, government-funded support for new parents is provided by the Maternal and Child Health (MCH) Service, a universal primary care service for families with children from birth to school age [45]. The service is provided in partnership with the Municipal Association of Victoria (MAV), Victorian LGAs and the DEECD. The universal MCH Service offers ten consultations to parents (known as Key Ages and Stages (KAS) visits), delivered by Maternal and Child Health Nurses (MCHNs) in MCH centres located throughout all LGAs [45]. MCH centres are located in local communities, often adjacent to kindergartens, and aim to be easily accessible to parents. Victorian MCHNs are registered nurses with additional midwifery and maternal and child health qualifications. The first MCHN consultation takes place at approximately one to two weeks postpartum in the mother's home. Mothers and infants subsequently attend consultations at their local MCH centre at two, four and eight weeks; four, eight, twelve and eighteen months; and two and three and a half years of age. At each consultation, parents are given the opportunity to discuss concerns, and their child's health, growth and development. Infant feeding outcomes are collected at KAS visits, with infant feeding practices at hospital discharge, two weeks, three months and six months postpartum reported to the DEECD.

## The intervention

Proactive peer support will be provided by telephone, replicating the intervention found to be effective in the Canadian trial by Dennis et al. [42]. A specific telephone call structure will guide peer contact (see below). Peers will be encouraged to provide most of the contact in the important early weeks, when many women cease breastfeeding, with continued contact tapering off up to six months postpartum. In our previous RCT, 73% of women who were breastfeeding at three months continued until at least six months [9]; we therefore will target the first three months as the critical time for provision of most support.

## Peer volunteers

### *Criteria for peer volunteers*

- Lay women who have successfully breastfed for at least six months, who are *not* trained breastfeeding counsellors, but who have a positive attitude to successful breastfeeding.

### *Recruitment of peer volunteers*

- Peer volunteers will be recruited from the community by advertisements in local newspapers and pregnancy clinics, distribution of flyers to MCH Centres and by word of mouth. ABA will also advertise for volunteers among members who are not trained

breastfeeding counsellors via newsletters and electronic media.

- Women will be asked to ring to express an interest, and will be interviewed/screened for suitability by a member of the research team and or the peer volunteer coordinator.

### ***The role of peer volunteers***

To provide empathy, encouragement and social support to the women by telephone, as well as to provide information and suggestions about existing clinical and support services (e.g. MCH Nurses, breastfeeding clinics, lactation consultants, General Practitioners, ABA) as indicated and as desired by the participants.

### ***Education and support of peer volunteers***

- Peer volunteers will undertake education consisting of four hours with an ABA educator. ABA is a Registered Training Organisation and has a short course that they have adapted for training the peer volunteers in this trial.
- The focus will be developing the peers' skills in listening, information giving, problem-solving, and recognising the need for referral. Strategies for communicating and providing support will be explored, as will the issues of being non-judgemental, empathetic, recognition of boundaries and the need for self-care. Resources in relation to breastfeeding information will be discussed.
- A handbook will be distributed to use, with guidelines for referral and general information.
- Regular ongoing group meetings between volunteers, the volunteer coordinator and investigators will assist with clarifying any issues the peer volunteers may have and to facilitate keeping to the protocol. The volunteer coordinator will also stay in regular telephone and email contact with the volunteers.
- Peer volunteers can contact the volunteer coordinator and trial investigators by telephone at other times for any information, advice or support.

### **Contact schedule**

*Initial contact:* women allocated to peer support will be telephoned by peer volunteers within four to six days of birth (after discharge from hospital). The *focus of the first call* will be to establish contact, ask how things are going, let the woman know when she will be 'routinely' called, and encourage women to ring 'their' peer any time they would like someone to talk to, or have a concern regarding breastfeeding.

*Second contact:* the peer volunteer will telephone again three to four days after the initial call (when the baby is eight to 10 days old) to offer: encouragement with breastfeeding; empathetic support regarding adjustment to life with a new baby and the fact that breastfeeding is not always 'easy'; and to remind women that they are free to ring the peer volunteer whenever they feel it would be helpful (the peer volunteer may also call earlier if they think this will be helpful).

*Frequency of calls:* the peer volunteer will telephone all women at weekly intervals (reduced to two weekly for women who prefer less contact) until the baby is 12 weeks of age. In all cases the focus will be to offer support with breastfeeding in particular, and adjustment to parenthood in general, directing women to existing local services as appropriate or if requested. The peer volunteer will remind each woman of her availability if the woman wants



to talk any time between scheduled calls. From three to six months the peer volunteer will continue with less frequent calls (three to four weekly). If women stop breastfeeding, the peer volunteer will discontinue contact.

## **Recruitment**

Research midwives will recruit women to the trial in the postnatal wards of the study hospitals, at least 24 hours after the birth (unless earlier discharge is planned) and prior to discharge from hospital.

### ***Assessment of eligibility***

A research midwife will review a computer generated list of all women who have given birth to their first baby in the previous 24 to 48 hours, then approach the staff in the postnatal ward to confirm eligibility.

### ***Recruitment and informed consent***

The research midwife will follow a protocol to approach women, explain the study, offer trial participation and obtain written consent. It will be made clear that women can withdraw at any time.

## **Randomisation**

Women will be randomly allocated to peer support or usual care. The randomisation list will be stratified by study site; the randomisation ratio is 1:1 peer support to usual care, with block sizes of four or six distributed randomly. Blocks will be pre-assigned to strata. The total anticipated number of women to be randomised = 1152. Randomisation codes sufficient to allow for recruitment of 1,000 subjects per stratum will be generated.

A computerised system of randomisation designed and administered by an external party will be accessed via the internet to ascertain women's allocation. The research midwife will follow prompts on the telephone, including entering the woman's hospital record number. A randomised allocation will be generated, then the woman informed of the outcome.

## **Data collection**

### ***Blinding***

The nature of the trial necessitates non-blinding of participants. However, data collection will be undertaken blinded to group allocation where at all possible, recognising that women may volunteer information about having a peer supporter at interview. Data will be presented to the data monitoring committee for the interim analysis in unlabelled study groups. The research team will remain blinded to group allocation until the trial is fully recruited and data cleaning and initial analysis is complete.

## ***Data collection***

Outcome data will be collected at six months by telephone interview, with baseline data collected at recruitment along with limited obstetric data. The schedule of participant enrollment, intervention and assessments is shown in Figure 1.

---

**Figure 1 Protocol schedule of enrolment, intervention, and assessments for the RUBY trial participants.**

---

## **Process and impact evaluation**

### ***Measures of intervention exposure***

Peer volunteers will be asked to keep and regularly submit a log of contacts with their allocated women detailing number and length of calls/visits held with each woman and broad content of discussions in order to assess intervention delivery. This will also enable the volunteer coordinator to follow up if contacts are not occurring as per the protocol. Exposure data will also be collected from the women after completion of their six month telephone interview (see below).

### ***Intervention evaluation from the participant and peer support volunteer perspectives:***

- Women in the intervention group will be sent a short questionnaire to elicit their views about the intervention (after six month data collection);
- When they cease being a peer volunteer the supporters will complete a short questionnaire evaluating their experience of providing support.

### ***Cost-effectiveness of peer support***

The economic evaluation will first compare the incremental costs and all consequences of the intervention to the control group and then assess cost-effectiveness against any breastfeeding at six months. Data collection for economic evaluation is integrated in the process and outcome evaluation components e.g. household expenditure on infant feeding materials and equipment; health service use since discharge (e.g. admissions, General Practitioner visits, drug treatments, use of midwife/ MCH nurse/other sources of help and advice). Resource use detailed in activity logs will be costed using standard unit costs for telephone expenses and for time use of peers and participants. The trial team will keep detailed records of resources used in peer recruitment, training, support and coordination.

## **Sample size**

Power calculations for the primary outcome are based on the rate of feeding *any* breast milk in Victoria at six months postpartum. This has been 46 to 47% in recent years (Victorian MCH infant feeding data) with no difference based on whether it is a first or subsequent baby (calculated by DAF using 2008 local government data from three areas) [20]. We estimate a 10% increase to be the smallest clinically important difference that we need power to detect.

An estimated sample size of 822 women based on 80% power ( $\alpha = 0.05$ ) would allow the detection of an increase in the proportion of infants receiving any breast milk at six months from 46% in the control group to 56% in the intervention group (calculated using Stata 9). Allowing 20% loss to follow up, 1028 women are required. This will also provide power to detect a range of other differences (see Table 1). Although the catchment areas of the trial sites show average breastfeeding rates at six months of 35%, it is likely that more motivated women will agree to participate in such a trial, therefore we have taken a conservative approach and based the sample size calculations on the state average. To show a 10% difference from 35% to 45%, a smaller sample size is required, therefore with our current approach we would have more than adequate power to show a 10% difference if the baseline breastfeeding in our sample were 35%. Secondary outcome figures were derived from our previous breastfeeding trial (six month outcomes) [9].

**Table 1 Power calculations with base number required of n = 411 in each trial arm\*\***

Outcome	Standard care %	Peer support %	Power to detect specified difference
PRIMARY			
Any breast milk at six months	46	56	80
SECONDARY			
Breast milk <i>only</i> at six months <sup>#</sup>	35	45	82

\*\*Allows for loss to follow-up and adjusting for clustering in the analysis.

<sup>#</sup> Breast milk only type of milk.

To account for potential *within peer* clustering in outcomes for women allocated to peer support we have inflated the sample size by 12% based on simulations to estimate the effect of clustering, assuming an overall average breastfeeding rate of 56% in the intervention arm [46]. We estimated numbers of clusters (individual peer supporters), the average number women in each cluster and a likely range of breastfeeding responses from clusters to calculate an intra-class correlation ( $\rho$ ) of 0.086 and an inflation factor of 1.12. Therefore our final estimated sample size to be recruited is 1152.

## Data analysis

### *Breastfeeding duration*

Data will be collected to meet the Consolidated Standards of Reporting Trials (CONSORT) guidelines for reporting of randomised trials [47]. The first stage of analysis will check the comparability of the groups. In relation to the trial hypotheses, the intervention group will be compared to the control group by intention to treat analysis. Proportions of women breastfeeding at hospital discharge and six months will be compared. Duration of breastfeeding (exclusive and partial) will be compared by survival analysis, and the log-rank test used for comparisons. Comparison of means will be undertaken using t-tests where data are normally distributed, or medians compared using Mann–Whitney U tests used if continuous data are not normally distributed. Ranked or Likert type scales will be analysed using Mann–Whitney U tests, and/ or cumulative odds ratios. If there are any baseline differences in the characteristics of women in the two groups, which might be associated with the major outcomes, a supplementary multivariate analysis will be carried out.

## ***Economic analysis***

First stage analysis will be a cost-consequences analysis, with net costs borne by peers, households and health services compared to the above set of primary and secondary outcome measures. Cost-effectiveness analysis will then be conducted against the primary outcome measure (any breastfeeding at six months) to estimate incremental cost-effectiveness ratio in terms of additional cost per additional woman breastfeeding to six months. No discounting will be applied to this one-year evaluation. Extensive sensitivity analysis will be used to explore the impact on cost-effectiveness of uncertainty in cost and outcome data and of possible alternatives to the methodological approach taken (e.g., excluding resource use by households) [48,49].

## ***Ethical considerations***

Research ethics approval has been obtained from La Trobe University (12-082), Royal Women's Hospital (12/25), Sunshine Hospital (HREC/12/WH/107) and Monash Medical Centre (12251B). The trial was registered with the Australian and New Zealand Clinical Trials Registry (ACTRN12612001024831) on 24 September 2012.

## ***Data Monitoring Committee (DMC)***

A DMC will be established to check the randomisation and undertake an interim analysis after 576 women have completed the interview at six months postpartum. The committee of three will include a statistician and a breastfeeding expert with training to participate in a DMC. Criteria will be agreed prior to trial commencement.

## ***Feasibility***

### ***Focus group study demonstrating feasibility***

In 2006/07 we used focus groups to explore the willingness of women (in the catchment areas of proposed trial sites) to utilise telephone peer support for breastfeeding, and to ascertain what factors would maximise their likelihood of doing so, for example characteristics of the peers, and timing of contact. We also explored methods of recruiting suitable peer volunteers in our community and the willingness of women to act as volunteer peer supporters. We conducted four focus groups including a total of thirty-six women. One group was a targeted group for women from a non-English speaking background. We found:

- o *Overall response*: women were positive about the idea of peer support.
- o *Contact frequency*: overall there was a sense that this should be individualised and flexible, but relatively frequent e.g. one to two contacts weekly.
- o *Preferred peer characteristics*: these were less concerning to women than anticipated; more important was that there was continuity, and that it was someone who had themselves breastfed and who had characteristics such as good listening skills and empathy. Factors such as age and ethnicity were considered less important by women.
- o A number of women at each focus group would consider acting as peer volunteers.

## ***Potential uptake and willingness to be randomised***

We undertook a pilot study at RWH in February 2010 to estimate the proportion of eligible women who would be willing to participate in a study of telephone peer support, and of those how many would be willing to be randomised. Of the 189 women potentially available for recruitment (i.e. on postnatal ward), 68 (36%) met the trial eligibility criteria, of whom 58 were approached. Of those women eligible and approached, 39 were willing to take part in a study of peer support, of whom 37 (64% of those eligible and approached) would be willing to be randomised.

The majority of women who would not participate were very supportive of the concept, but did not consider it personally appropriate. Reasons for this included: already having adequate support for breastfeeding, planning to join ABA, or a preference for professional support or 'hands on' support.

## **Timelines**

We expect this trial to take three years. Combined, the trial sites have well over 12,000 births per year, of which approximately 40% will be primiparous.. Assuming an uptake of around 50% based on our feasibility work, and taking into account our eligibility criteria we estimate recruitment will take approximately 15 months. We have allowed 18 months to take into account missing women with short length of postnatal stay, and unexpected periods of non-recruitment e.g. unplanned leave. Following enrolment of the last woman, completion of data collection will take a further six months.

## **Discussion**

Breastfeeding is an area of increasing health inequalities, where the costs and health burdens of *not* breastfeeding fall disproportionately (and increasingly) on the more disadvantaged groups [11,43]. The relatively high proportion of women from disadvantaged backgrounds at the proposed sites provide appropriate populations in which to trial an intervention to increase breastfeeding. This will be the first Australian RCT to test the effectiveness and cost effectiveness of proactive peer telephone support for breastfeeding.

## **Abbreviations**

ABA, Australian Breastfeeding Association; CI, Confidence interval; DMC, Data Monitoring Committee; MCH, Maternal and child health; MMC, Monash Medical Centre; NHS, National health survey; RCT, Randomised controlled trial; RR, Risk ratio; RUBY, Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding; RWH, The Royal Women's Hospital; SH, Sunshine Hospital; UNICEF, United Nations Children's Fund; USA, United States of America; WHO, World Health Organization

## **Competing interests**

The authors declare that they have no competing interests.

## Authors' contributions

DAF, HLM, MAD, LHA, RS, LG, KM and AMM conceived the study, developed the protocol and data collection tools, and applied for funding. HG and FMH contributed to design of the trial implementation plan, strategies for recruitment of participants and peer supporters, and to the design and piloting of data collection and process evaluation tools. All authors read and approved the final manuscript.

## Acknowledgements

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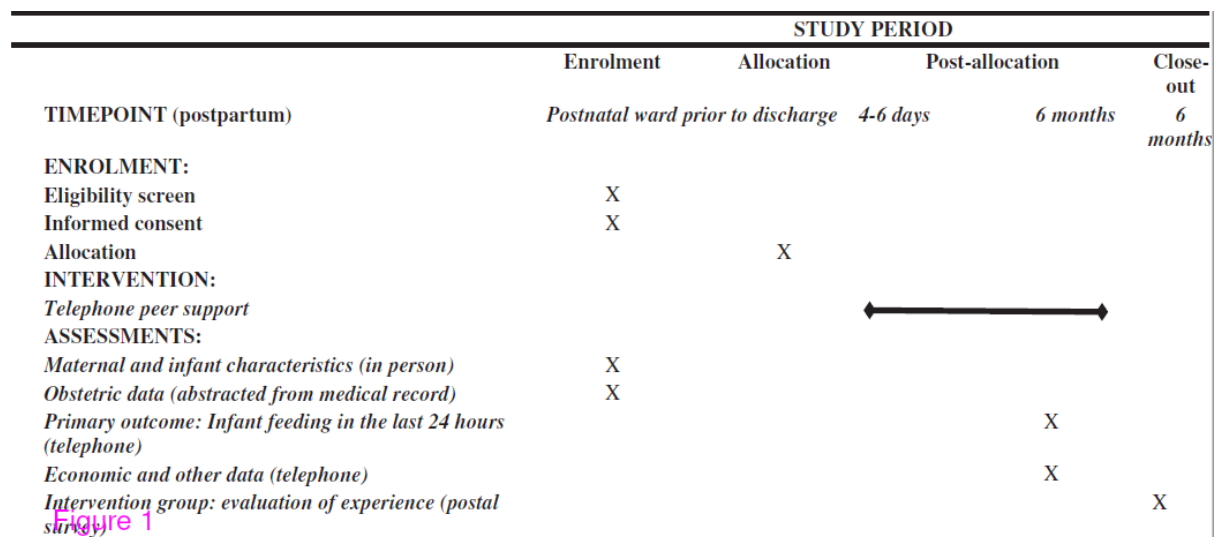


Figure 1

## **Appendix B   RUBY peer training PowerPoint**

---



ringing up about  
breastfeeding


### RUBY VOLUNTEER MOTHERS' TRAINING DAY



1

### RUBY volunteer mothers – training day

Introduction of presenters	Lunch 12.00-12.30pm
Orientation to venue	Normal baby behavior
Introduction	Resources and referrals
About the study	Role plays
Being a "RUBY" volunteer mother"	Discussion
Values, language & listening	Review role of peer supporter
Empathy	Summary, evaluations



ringing up about  
breastfeeding

2

### RUBY collaborators



ringing up about  
breastfeeding

Judith Lumley Centre  
(formerly known as  
Mother & Child Health Research)



Funding: The Felton Bequest and La Trobe University



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breastfeeding

3

### Research Team

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- Helen McLachlan
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- Lisa Amir
- Lisa Gold
- Rhonda Small

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Nanette Shone (ABA)  
Anita Moorhead (Women's)  
Patrice Hickey (Sunshine)  
Jenny Tenni (Sunshine)  
Fiona McLardie-Hore (Women's)  
Cindy-Lee Dennis (Canada - did similar trial)  
Chris East (MMC)  
Heather Grimes (La Trobe)




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4

### BACKGROUND – the evidence

- Breastfeeding offers significant short and long term health benefits to both mother and baby
- Socially disadvantaged infants already at risk of poorer health outcomes are less likely to be breastfed
- Evidence on how to maintain breastfeeding in countries (such as Australia) with intermediate to high breastfeeding initiation is sparse
  - Many strategies aimed at increasing breastfeeding duration have not been successful
  - Breastfeeding had been static for 15-20 years in Australia until recently . . . now the issue is the increasing gap between families in lower and higher income groups



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5

### National Breastfeeding Strategy (2010-2015)

**Aim:**

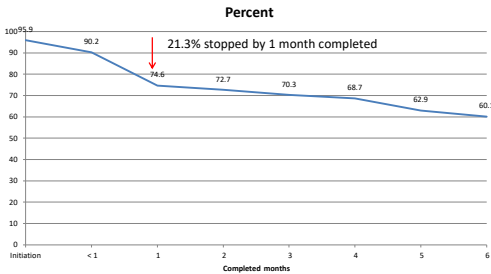
**To increase the percentage of babies who are fully breastfed from birth to 6 months of age, with continued breastfeeding and complementary foods to 12 months and beyond\***

\*Australian Health Ministers' Conference: Australian National Breastfeeding Strategy 2010-2015. Canberra: Australian Government Department of Health and Ageing; 2009.



6

Breastfeeding initiation and duration

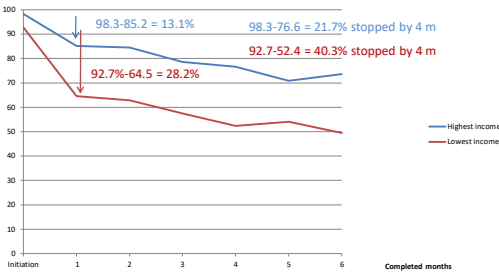


2010 Australian National Infant Feeding Survey: Initiation and Any breastmilk, by age

7

Breastfeeding initiation and duration

... by income



2010 Australian National Infant Feeding Survey: Initiation and Any breast milk, by age and highest and lowest income quintile

8

Aims of RUBY study

Primary aim

To determine whether volunteer peer support, provided in the postnatal period by telephone, increases the proportion of infants who are breastfed for at least six months

Secondary aims

- Test if a telephone peer support intervention increases breastfeeding duration
- Evaluate the interventions from the participant and volunteer perspectives
- Evaluate the cost-effectiveness of peer support

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9

RUBY study design

- A three site, two arm randomised controlled trial
- Women having their first baby will be recruited on the postnatal wards of the three public maternity study hospitals – all provide care to relatively disadvantaged women
  - Women's
  - Sunshine
  - Monash Medical Centre
- Baseline data will be collected, then women randomly allocated to telephone peer support or routine care
- All women will be interviewed at six months
- After the six month interview, women who received peer support will be surveyed regarding their experience of support

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RUBY study intervention

- Women allocated to peer support
  - linked to volunteer mother
- Volunteers will be women who have:
  - breastfed a baby for at least six months
  - a positive attitude to breastfeeding (not bf experts)
- Volunteer mothers will have weekly telephone contact with the woman in the first three months (when risk of weaning is highest) with less frequent contact up to six months.
  - focus on emotional wellbeing, breastfeeding progress/issues and transition to parenthood
  - direct women to existing services if judged

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RUBY study timelines (1)

We expect the trial to take 3 years

- Recruit volunteer mothers
- Recruit women to trial and randomise them
- Allocate volunteer mothers to study participants
- Data collection, analysis and write up
- We need 1152 study participants

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### RUBY study timelines (2)

Volunteer mothers may be involved for all or part of the time

- some may wish to provide support to only one new mother
- others will be involved with multiple women over study

We ask that you commit to supporting at least one new mother for approximately 12 weeks after she has given birth,

- unless she decides this isn't necessary,
- or ceases to breastfeed

Call logs will be kept for each study woman

- Detailing number of calls, time, brief details



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### What is the role of the volunteer coordinator?

- Responsible for matching volunteers with new mothers
- Support of volunteer mothers
- Conduct get-togethers for volunteer mothers
- Assist with reimbursement for expenses such as phone calls
- Address any concerns and issues raised by volunteers
- Collect call log data and analyse this information

Conduct research about the volunteers' experiences in the study (voluntary aspect)

**Volunteer coordinator contact details:**

- Heather Grimes, Lynnelle Moran or Fiona McLardie-Hore
- Email: [Rubystudy@thewomens.org.au](mailto:Rubystudy@thewomens.org.au)



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### RUBY - getting connected

As new mothers enrol, you will be matched with a mother

- her name and phone number will be given to you by volunteer coordinator

Aim to make contact within 4-6 days of her giving birth

- focus of first call will be to establish contact and ask how things are going
- give her an opportunity to talk about herself
- before you end conversation let her know when you will call her again

Second contact is 3-4 days after initial call

- aim of this call to encourage breastfeeding and provide empathetic support



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### RUBY - staying connected

#### Summary of contact schedule

Initial contact	Volunteer rings the new mother with 4-6 days of birth
Second contact	Volunteer rings new mother within 3-4 days after the initial call
Subsequent calls	Weekly for first 12 weeks after birth unless mother prefers less contact. Three to four weekly from 12 weeks to six months after birth

The volunteer mother will be available if the new mother wants to phone her between scheduled calls

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### RUBY - how much time will it take?

The time commitment will vary depending on the mother(s) you are supporting

It is important support be tailored to her individual needs  
You and new mother will need to decide together what time frame is most appropriate

Try to be available for the new mother

This does NOT mean providing "around-the-clock" support but that you be accessible when she needs you

The mother should not feel as though she is "irritating" or "harassing" you when she calls

"Perceived availability" depends largely on being approachable.  
Knowing someone available - greater benefits than actually receiving support  
Mother will probably be satisfied, as long as you are available, reliable, friendly, caring, and supportive

You are NOT expected to speak to the mother for hours

The mother will need extra support initially but after the first couple of weeks, your time requirements will probably decrease



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### Who can become a RUBY volunteer?



Anyone who has breastfed their baby for at least 6 months and agrees to abide by the study protocols



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What does being part of a trial mean?

- o Really important that there is a consistent approach
- o As volunteers important to provide the support as discussed today
- o At the end of the trial – if it makes a difference we can accurately describe what made a difference, and people could implement the model
- o Also means completing the call logs – again part of describing exactly what did or did not work
- o You – the RUBY volunteer mothers are the most important aspect
  - we will provide support, feedback to you
- o You are not professional – you don't have to solve peoples problems – your role is a support one (that is what the next session is about)

ANY QUESTIONS ON THE RESEARCH SIDE OF THINGS?



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Peer support



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What do we need to do?

RUBY volunteer mothers are trained to . . .

- offer support and help to breastfeeding mothers
- promote and encourage breastfeeding
- respect mothers' decisions.
- be friendly and respectful
- keep information private



Code of Ethics - no naming of health professionals, confidentiality, respecting everyone's opinions and values

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RUBY Volunteer Mothers

- do not solve family problems
- do not tell mothers they must breastfeed
- do give out resource material
- refer mothers to breastfeeding support and other services
- maintain contact with RUBY



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THINKING ABOUT YOUR VALUES



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Our own values


What are the first 2-3 words that you think of?




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25





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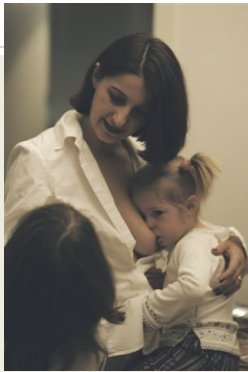





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### OUR ideas, beliefs & values

Our values and beliefs around infant feeding influence us.

We may accidentally put our own values on the mother. This is not showing respect.

We need to clarify our own values, so we can respect those of other people.

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### Our own experience!

Use it

- \* Set aside your values
- \* Work with the mother, where **SHE** is at
- \* There is no one right way.

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### WHAT ARE WE REALLY SAYING?

**LANGUAGE**



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### Keep it positive

We work with mothers at a very important and vulnerable stage of their lives.

What we say makes a difference!

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### Use positive language

To build confidence in the mother

*"See how he is looking at you – he turns towards your voice. He knows it from before he was born."*

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## Use positive language

To value the mother's opinions and life experience

*"He must be the happiest baby in the world – sleeping full and content in mum's arms – what baby wouldn't want to do that?"*



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## Use positive language

To teach

*"Look how content he is now he's had a breastfeed."*



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## Building confidence

Use the mother's values, expectations or experiences.

For example:-

- *'You're doing a great job, look how your baby is growing and changing.'*
- *I can see how much you care you bring your baby in regularly for health checks.*



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## Nothing succeeds like success

- Help mothers understand the value of what they are doing
- Even if mothers are exhausted, don't try to take over.
- Offer reassurance and ideas to look after herself **and** the baby.



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## Nothing succeeds like success

- Help mothers achieve success – they might need you to show them their successes



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# Listening






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## Listening


Listening includes observing body language (60% of communication is non-verbal)

Listening can be affected by many factors –

- physical,
- emotional,
- attitudes etc.



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## Listening Behaviours

- Body language (of listener)
- Eye contact (where appropriate)
- Consider your environment
- Tone of voice



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## Listening Behaviours

Mothers feel like we listen when we use personal information such as her name and baby's names.

Be patient – pauses are okay and can allow the mother to think about her story. Use small responses and encouragers



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## Listening involves use of small encouragers

- Mmm ...
- Really ...
- OK ...
- I see ...
- And then ...?
- So ...
- Yes ...
- Uh-huh ...
- Go on ...







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## Questions

- Tell me more about ...?
- Then what happened?
- After that ...?
- Are there any things you have already tried?
- Do you think that any of these things helped?

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### Barriers to Listening

- ❖ Physical or emotional
- ❖ Strong emotions
- ❖ Personal topics
- ❖ Communication difficulties
- ❖ Personal difficulties



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### Activity- Active Listening



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### Activity: Listening

Break in to pairs.

- One person to be a listener and one person to be a talker.
- The talker is to talk for 2 minutes on anything they like.
- The listener is to provide no indicators that they are listening .

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### Activity: Listening

How did you feel as a talker?

- What did you do to try to get the listener's attention?

How did you feel as a listener?

- Could you concentrate?
- Can you remember much of what was said?



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## Empathy



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### Empathy

Empathy is showing a mother that you understand.





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Sympathy and Empathy

	Mother	Peer supporter	Mother
Sympathy	I have a problem ⊗	You poor thing ⊗	That doesn't really help ⊗
Empathy	I have a problem ⊗	You're really feeling worried about it ⊗	It feels good to be understood ⊕

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Using Empathy

Sevda says, “I’ve never been out without my baby. My partner has a work dinner that he really wants me to go to. How can I go?”

How does this mum feel?	What could this mum be hearing?	What could you say to this mum to help her feel better?
confused, guilty, worried	She'll be fine. Don't worry. You need a night out.	

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Using Empathy

Francesca says,  
“I have to go back to work, so I have to give up breastfeeding.”

How does this mum feel?	What could this mum be hearing?	What could you say to this mum to help her feel better?
	How horrible! You poor thing! He'll be fine in child care.	

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Using Empathy

Joyit says,  
I’ve been trying for a couple of weeks to get my baby to take a bottle of formula but he just won’t take it.

How does this mum feel?	What could this mum be hearing?	What could you say to this mum to help her feel better?
	Your baby will sleep better on formula. You need to try harder.	

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Using Empathy

Toula says,  
“I am having trouble getting my baby attached correctly and my nipples are sore. Mario’s 4 days old and I am so tired.

How does this mum feel?	What could this mum be hearing?	What could you say to this mum to help her feel better?
	You need to get some sleep. Breastfeeding is too hard.	

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Encouraging and Supporting





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### Positive and Reassuring statements

- You are doing a great job
- You are being a really good mum for your baby
- It sounds like you know what you are doing
- It looks like you can really tell what your baby wants.



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### Checking understanding

- Before we go on, it will help me to check with you that I understand what has been happening. Would you mind if I do this?
- Just to go over some of what you said before we go on ...
- It sounds like this has been happening ...
- From what you said it seems that ...
- Am I right in thinking...?



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## WHAT IS NORMAL BABY BEHAVIOUR?



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### How many breastfeeds?

8 - 12 feeds in 24 hours (sometimes more)

Cluster feeding

Sucking time varies



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### If it hurts

Nipples may be sensitive in the early days

Pain is **not** normal. If mother feels pain while feeding: seek further support

Ongoing pain may be due to something more serious



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### Is baby getting enough?

6 - 8 very wet cloth nappies (5 disposables) in 24 hours

2 or more poopy nappies in 24 hours for little babies

Good skin colour and muscle tone

Alert and sometimes content

Some weight gain and growth



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Is baby hungry?

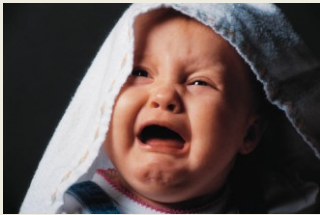
Fussing  
Wriggling  
Grunting  
Hand to mouth  
Turning head to side

Fussy Days

- Baby may want more feeds for a few days
- Common at 2 weeks, 6 weeks, 3 months, 4 months and 6 months

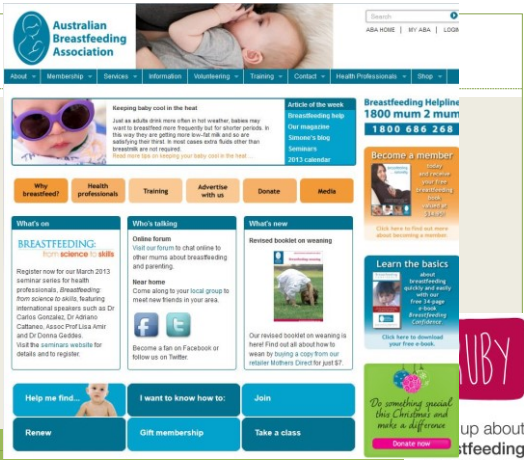
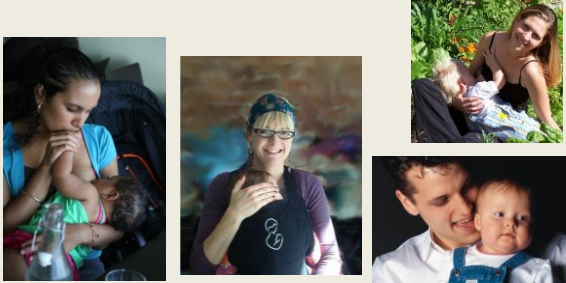
Reasons babies cry

Bored  
Hunger  
Fussy day  
Too hot or cold

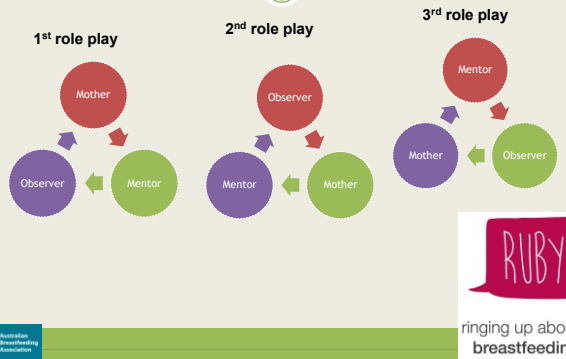


Pain  
Lonely  
Tired  
Sick

Resources



Role plays





Time to review

- Language
- Listening
- Empathy
- Importance
- Resources
- Normal baby behaviour




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Time to review


- As a volunteer mother, you will provide empathy, encouragement and social support to new breastfeeding mothers by telephone. You are not expected to provide a solution to all her problems.
- However your own breastfeeding experience may enable you to support the woman's decisions, and to suggest alternative strategies or direct her to other resources
- Any questions????



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## WORK AS A VOLUNTEER MOTHER

The next steps.....

Heather Grimes - volunteer coordinator

- Allocation of mothers
- Recording what you do
- Support processes
- Follow-up
- Questions



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Evaluation

Please complete the evaluation form as this assists us in maintaining quality in our deliveries and presentations.

We would love to hear of any suggestions and ideas that you might have



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## Appendix C The experiences of breastfeeding peer volunteers: evidence from the literature

AUTHOR/ DATE/ COUNTRY	METHOD	VOLUNTEERS	INTERVENTION	TRAINING	THEMES/ OUTCOMES (THE TEXT IN THIS COLUMN MAY CONTAIN DIRECT QUOTES OR SLIGHTLY EDITED TEXT EXTRACTED FROM THE PUBLISHED PAPER)
<b>DENNIS (2002) CANADA</b>	Quantitative analysis of call data and survey	Minimum six months breastfeeding (BF) experience. Volunteers recruited from local community.	Proactive postnatal telephone peer support for three-months after birth.	2.5 hours (sufficient but volunteers would have liked ongoing sessions).	Most enjoyable aspects were the opportunity to meet other women (53%), receive new information (33%), and observe the vol coordinator as a positive role model (14%); 70% reported that training modifications not required. Volunteers reported mothers: listened to what they had to say (77%), showed mutual trust and respect (83%), accepted their support (73%), and appreciated them (70%). Overall, 70% of peers felt like they were contributing something positive. 60% of peers felt uncomfortable at least once; felt disappointment due to a mother stopping BF, their inability to develop a relationship, or the lack of response to their telephone calls. Did not interfere with their family and work life. Personal growth and enhanced self-esteem.
<b>RAINE (2003) UK</b>	Qualitative interviews	Volunteers recruited from local community. Could commit to the project for at least nine months.	Part of larger project. Mothers referred by health professionals. Community based peer support. Method of delivery unclear.	La Leche League based training package.	Volunteering was catalyst for engaging in other activities e.g., further education. The BF peer support project contributed to community-capacity-building. External recognition was a new experience for many volunteers, one that may help to boost personal confidence and self-esteem. Taking part in the training course reinforces the perception that they have something of value to offer their community. For women living in disadvantaged areas, whose opportunities for self-advancement are few, this type of outcome should not be underestimated.

AUTHOR/ DATE/ COUNTRY	METHOD	VOLUNTEERS	INTERVENTION	TRAINING	THEMES/ OUTCOMES (THE TEXT IN THIS COLUMN MAY CONTAIN DIRECT QUOTES OR SLIGHTLY EDITED TEXT EXTRACTED FROM THE PUBLISHED PAPER)
<b>WATT ET AL., (2006) UK</b>	Process evaluation	Volunteers recruited from local community.	1:1 in-home support from volunteers for a nine-month period up until the infant was aged 12 months.	Run over a 3-week period with four or five sessions timetabled per week.	Ongoing support from coordinator was important to maintain volunteers' enthusiasm and ability to provide support. Every eight weeks a four-hour support meeting was held. These meetings were generally well attended, and provided an opportunity for further training and, most importantly, the development of group support, mutual encouragement, and a shared goal.
<b>NANKUNDA ET AL., (2006) UGANDA</b>	Qualitative focus groups	Volunteers recruited from local community. 24-35 years of age and has BF a child <5yrs old.	In-home. Women recruited in late pregnancy for BF counselling session. Support continued after birth -peers arranged own schedule of visits with women.	Five days on BF counselling using the La Leche League curriculum.	Hands-on practice useful during training (counselling skills using role-plays and more practise with real mothers). Peer role was a novel experience for volunteers that used their knowledge about BF. Most displayed a feeling of an 'uplifted' status in the community. Completely voluntary work is difficult to maintain in this rural Ugandan setting; discussions on how to compensate the peer counsellors for their time should be part of an exclusive breastfeeding intervention.
<b>CURTIS ET AL., (2007) UK</b>	Qualitative focus groups	Volunteers recruited from local community. BF experience.	Informal role to support BF in community, more formally in hospital and clinics.	20 hrs of classroom- based learning + ongoing opportunities for training.	Two overarching themes: <i>benefits of working with the PS scheme &amp; constraints on enabling working relationships</i> . Volunteers reported enhanced social support and increased self-esteem and personal development. Both volunteers and health professionals described 'gate-keeping' by health professionals to control volunteers' access to, and work with, BF women. Volunteers develop skills and experiences that may have relevance beyond time-limited project. Maybe passport back into paid employment or further education.
<b>MEIER ET AL., (2007) USA</b>	Qualitative focus groups	Volunteers recruited from local community. High school education; available	Antenatal & in- hospital visit if allowed by health service. Phone within two- days of birth and at least one home visit. Weekly calls for 1/12,	Two days training.	More than just BF support - emotional too. Education alone not enough to help women- building trust and ability to help women important. Calls responsive to mothers' needs. Visits ranged from 15 minutes to several hours. Training – felt well informed either through training or personal experience. Felt unprepared for actual contact with mothers – took at least

AUTHOR/ DATE/ COUNTRY	METHOD	VOLUNTEERS	INTERVENTION	TRAINING	THEMES/ OUTCOMES (THE TEXT IN THIS COLUMN MAY CONTAIN DIRECT QUOTES OR SLIGHTLY EDITED TEXT EXTRACTED FROM THE PUBLISHED PAPER)
		transport, BF at least one child.	then monthly for 12 months.		one year to feel comfortable in role. Challenges included language barriers, being accepted in women's homes, allowed in hospitals. Women's competing priorities e.g., food insecurity and family relationship difficulties. Role rewarding both intrinsic and extrinsic (e.g., career steppingstone.). role flexible and family friendly.
<b>MURPHY ET AL., (2008) UK</b>	Qualitative semi-structured one-to-one interviews	Volunteers recruited from local community. At least one child <10yrs.	Provided from 1 <sup>st</sup> antenatal visit to one-year postnatal. Planned two- weekly (responsive to mothers' needs).	1 x 2hrs for first 3 weeks. Group meetings every 6-8 weeks.	Volunteers reported difficulty initiating contact with some women and this affected their morale adversely. Also reported difficulties developing relationships with those who lacked interest in the program. External influences, including family and friends, could prevent or facilitate mentoring. Time constraints in reconciling flexible mentoring arrangements with demands of other commitments posed major personal difficulties for lay-workers. Paid travelling & telephone expenses and £6 for every hour spent in association with the program. Training could include potential negative and positive influences of other people and the importance of awareness of different cultural practices.
<b>MCLEISH &amp; REDSHAW, (2015) UK</b>	Qualitative semi-structured one-to-one interviews	Not specified for each of the nine included studies. All participants had BF at least one child.	Antenatal and postnatal period. Study included nine peer support projects. Mostly 1:1 with contact during pregnancy and duration ranged between 12 weeks – two- years postnatal.	Training ranged between four and 18 sessions and varied between eight and 75 contact hours.	Relationship with mother started by establishing mother's needs and working out how best to meet them within the parameters of the project. Some volunteers were from socio- cultural backgrounds very different from the mothers e.g., volunteers had resources, social networks, language skills and confidence that the mothers lacked. One volunteer suggested that her emotional distance from the challenges facing the mothers meant she could sometimes be more effective as a supporter. 'The Peer Support relationship', contained five themes: ' <i>a friend or a 'professional friend'</i> ' (managing boundaries, sharing personal experiences), ' <i>building relationships of trust</i> ' (providing practical support to develop

AUTHOR/ DATE/ COUNTRY	METHOD	VOLUNTEERS	INTERVENTION	TRAINING	THEMES/ OUTCOMES (THE TEXT IN THIS COLUMN MAY CONTAIN DIRECT QUOTES OR SLIGHTLY EDITED TEXT EXTRACTED FROM THE PUBLISHED PAPER)
					trust in cases of extreme hardship)', ' <i>avoiding dependency</i> '(managing situations where mother becomes dependant), ' <i>managing endings</i> '(natural evolution or tension of letting go), and ' <i>how peer supporters differ from professionals</i> ' ('understanding of the woman based on their relationship, trust, flexibility, available time and their empowering role which could give women a sense of agency over their own lives'.)
HOPPER & SKIRTON, (2016) UK	Qualitative semi-structured one-to-one interviews	BF experience. Voluntary.	Proactive and face-to-face in hospital maternity wards and community- based groups.	2.5 hrs x 10 weeks	Using their own personal exp of BF was both beneficial and acceptable. What motivated the peer supporters? Desire to help people. They felt they could 'make a difference', particularly by supporting mothers. Some peers expressed a sense of shared success with the mothers. Interest in midwifery as a future career was a strong motivating factor. The final motivating factor was the need for social contact. Those peer supporters who had stopped work to look after their children described how they were looking for adult social contact, and peer support met this need.
JOHNSON ET AL., (2017) NZ	Online qualitative survey	Not stated	Not stated	Training based on La Leche League	Themes generated included: <i>Increased confidence</i> : increased confidence the M4Ms peers gained through their enhanced knowledge; their increased confidence in talking with other mums; improved confidence other mothers gained from having this support available in their communities. <i>Personal satisfaction</i> : the sense of fulfilment they felt at providing a quality BF service to local mothers, and therefore, being recognised in their community for their knowledge, skills and expertise.
THELWELL ET AL., (2017)	Qualitative semi-structured	Peers interviewed were a mix of paid and	Peer supporters worked in BF cafés.	Training complies with UNICEF UK's BFHI and aims to give	<i>Motivation</i> : a desire to help others gain the same enjoyment they experienced, or a desire to repay the services that had supported them. Being able to grow psychologically by

AUTHOR/ DATE/ COUNTRY	METHOD	VOLUNTEERS	INTERVENTION	TRAINING	THEMES/ OUTCOMES (THE TEXT IN THIS COLUMN MAY CONTAIN DIRECT QUOTES OR SLIGHTLY EDITED TEXT EXTRACTED FROM THE PUBLISHED PAPER)
UK	one-to-one interviews	voluntary peer supporters.		a 'way of thinking' based on the Solihull Approach model.	working as a peer. Peer role gave them sense of purpose and usefulness at a time when they otherwise would not have. <i>Experience in the role:</i> Training taught how to communicate with parents and provided sufficient information. Peers were positive about the amount of information training provided and emphasised how it gave them confidence to support mothers, which increased once they started in role. <i>Supervision and support:</i> Felt supported by managers through regular one-to- one meetings. Could contact manager as required. <i>Positive experiences of providing peer support:</i> Peers passionate about BF and enjoyed the role. They reported that the mothers they supported felt cared for by the peers, regardless of feeding choice. Peers also commented on receiving extremely positive feedback from mothers both on antenatal visits and from audits.
TRICKEY ET AL., (2018) UK	Realist review of 15 studies of 1:1 BF peer support	N/A	Review of experimental studies (Jan 2000 -Jan 2016). BF (initiation, continuation, or exclusivity) as primary outcome among full term babies in high income countries. 1:1 models/ excluded intended to be group-based.	N/A	Seven categories identified: 1. Congruence with local feeding norms; 2. Congruence with the existing healthcare pathway; 3. Peer accessibility; 4. Peer qualities; 5. Interactions inside the peer–mother relationship; 6. Within-intervention feedback relating to the activity of peers; and 7. Legacy feedback. Peers motivated when they feel their work is valued and demoralised when they feel they are not appreciated. Working alone or with no opportunity to meet with other peers exacerbate feelings of demotivation
THOMSON & CROSSLAND (2019) UK	Mixed methods: survey/ individual or group interviews	Peers (paid & voluntary were local women who had BF at least one child.	Service provision comprised an integrated AN, hospital and community PS service. Antenatal support involved the hospital and	Equivalent of two days training. Access to further learning opportunities via ongoing supervision	'The peer supporters engaged with family members where possible to engage and enlist their support to help women sustain BF. Time pressures and restricted resources limited mothers' opportunities to access support. Meaningful, needs-led breast/breast-milk feeding support is a time consuming,

AUTHOR/ DATE/ COUNTRY	METHOD	VOLUNTEERS	INTERVENTION	TRAINING	THEMES/ OUTCOMES (THE TEXT IN THIS COLUMN MAY CONTAIN DIRECT QUOTES OR SLIGHTLY EDITED TEXT EXTRACTED FROM THE PUBLISHED PAPER)
			community peers talking to women about BF and providing support at AN classes / clinic.		and all peers reported personal and logistic challenges in providing 'quality' care.'
<b>KABAKIAN-KHASHOLIA N ET AL., (2019) LEBANON</b>	Qualitative semi-structured one-to-one interviews	BF at least one child for two months, a positive attitude towards BF, able to attend training and be able to read and write in Arabic, at middle school level or higher.	Nested within a RCT: Intervention group received: (a) AN BF education delivered by IBCLCs to raise awareness and improve knowledge (b) Postnatal lactation support provided by IBCLCs to improve skills, and self-efficacy through home visits, (c) Postnatal peer telephone support to build social support and enhance social capital.	Two x half day training sessions conducted by a paediatrician who was part of the research team.	The peers used the knowledge and skills acquired during their participation in the trial to reach out to pregnant, and postpartum women outside the trial. They were sometimes put in contact with pregnant, or BF women through their family members and friends, with the aim of providing information on BF. Peers reported benefiting from their experiences in the trial. They valued the training they received from the trial team, and especially the acquired knowledge, which corrected a number of common misconceptions about BF. Peers perceived that their involvement in the trial gave them a first-hand experience with the need to support BF mothers, and reinforced their commitment towards advocating exclusive BF.
<b>INGRAM ET AL., (2020) UK</b>	Qualitative interviews/ focus groups		ABA (Assets-based feeding help Before and After birth) intervention developed and offered within a feasibility RCT. Daily postnatal contact offered for the first two weeks, followed by less frequent contact until babe five months of age.		The vol supporters were excited by new opportunities to meet different women and provide support for several months, and the paid supporters appreciated the content but found that arranging visits to the women was difficult due to their workloads and distance to participants.

## **Appendix D    The Royal Women's Hospital: Ethics approval for the RUBY RCT**

---

Mr Arthur Hui  
 Administrative Officer  
 Research and Ethics Secretariat  
 Tel: +61 3 8345 3720  
 Fax: +61 3 8345 3702  
 Email: [arthur.hui@thewomens.org.au](mailto:arthur.hui@thewomens.org.au)

11.9.12

Professor D Forster  
 Maternity Services  
 RWH

Dear Professor Forster,

Re: Project 12/25 - Ringing Up about Breastfeeding: a randomised controlled trial exploring earlyY telephone peer support for breastfeeding: RUBY

Thank you for submitting the clarification and amendment as requested by the RWH Human Research Ethics Committee.

I confirm the project is now approved.

Enclosed please find Project Approval and Notification of Project Commencement Forms for your record.

**Prior to commencement of your project, you are reminded that you must contact the relevant RWH Divisional Directors / Department Heads to confirm your actual commencement date. Failure to inform these RWH personnel may jeopardise their approval and support for your project.**

Please return the completed Notification of Project Commencement Form to me when the project begins.

Yours sincerely,

**A. C. B. Hui**  
**Administrative Officer**  
**Research and Ethics Secretariat**

Encl:

**THE ROYAL WOMEN'S HOSPITAL**

**RESEARCH AND HUMAN RESEARCH ETHICS COMMITTEES**

**PROJECT APPROVAL**

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**PROJECT NO:** 12/25

**PROJECT TITLE:** Ringing Up about Breastfeeding: a randomised controlled trial exploring earlyY telephone peer support for breastfeeding: RUBY -

**INVESTIGATOR (S):** D Forster, H McLachlan, M Davey, L Amir, L Gold,  
 R Small, A Moorhead, P Hickey, K Mortenson, N Shone,  
 J Tenni, C East, F McLardie-Hore, H Grimes, C Dennis



**DATE OF APPROVAL:** 10 September 2012

**DURATION:** Thirty eight (38) months

**SIGNED** .....  
**Secretary, Research & Human Research Ethics Committees** **DATE**

#### CONDITIONS OF APPROVAL

*The Principal Investigator is reminded of the following:-*

1. *Prior to commencement of the project, you must contact the relevant RWH Divisional Directors / Department Heads to confirm your actual commencement date. Failure to inform these RWH personnel may jeopardise their approval and support for your project.*
2. *A Project may commence once the Principal Investigator has received written confirmation that the Human Research Ethics Committee has approved the Project.*
3. *Substantial changes in protocols must be submitted to the Research/Human Research Ethics Committees for approval.*
4. *Progress reports must be submitted annually. A request will be forwarded to the Principal Investigator. If no report is supplied, permission to continue the project may lapse.*
5. *The Research/Human Research Ethics Committees must be notified **IMMEDIATELY** of any untoward or unexpected complications or side effects arising during the project or of any ethical or medico-legal problems that may arise.*
6. *Consent forms must be available for audit and retained on file for five (5) years.*
7. *Raw data and details of analysis must be retained by the Principal Investigator for five (5) years.*
8. *Principal Investigator **MUST** upon leaving the Institution, inform the Human Research Ethics Committee as to the nominated person to replace him/her.*

PLEASE QUOTE PROJECT NO. AND TITLE FOR ALL CORRESPONDENCE

**RWH PROJECT NUMBER** 12/25

#### THE ROYAL WOMEN'S HOSPITAL

#### RESEARCH AND HUMAN RESEARCH ETHICS COMMITTEES

#### NOTIFICATION OF PROJECT COMMENCEMENT

**PROJECT TITLE:** Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding: RUBY -

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 J Tenni, C East, F McLardie-Hore, H Grimes, C Dennis

**DATE OF APPROVAL:** 10 September 2012

**DURATION:** Thirty eight (38) months

**DATE OF COMMENCEMENT** ...../...../.....

**PRINCIPAL INVESTIGATOR:**

**NAME**.....  
( PLEASE PRINT )

**SIGNATURE**..... **DATE**...../...../.....

## **Appendix E Letter of approval for ethics amendment (Royal Women's Hospital)**

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# HREC Amendment Form

In the event that an ethically approved research project requires amendment, this form must be submitted to the reviewing HREC by the Coordinating Principal Investigator (CPI).

The CPI is responsible for notifying all site Principal Investigators (PIs) of the amendment, in order for them to discuss it with their Research Governance Officer (RGO).

An amendment **must not** be implemented at a site until the HREC amendment has been approved by the reviewing HREC **and** (if applicable) Site Specific Assessment (SSA) amendment has been authorised at the site.

## Research Project Details

HREC Reference Number	<input type="text"/>	CPI for Research Project	<input type="text"/>
Local Reference Number	<input type="text"/>	HREC Approval Date	<input type="text"/>
Date of this Form	<input type="text"/>		
Project Title	<input type="text"/>		
Mode of HREC Approval	<input type="checkbox"/> Single state only <input type="checkbox"/> Interstate Mutual Acceptance		
Sponsor Billing Address	<input type="text"/>		
CPI Address	<input type="text"/>		

## Amendment Details

Explain the changes that have occurred or are intended <i>(may include changes in procedure, direction of project, source/manner of recruitment, number of participants or changes to research personnel)</i>	
<input type="text"/>	
Reason for the changes <i>(include a comment on the impact on the research project and the participants at sites for which the reviewing HREC is responsible)</i>	
<input type="text"/>	
Do these changes raise any ethical issues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, identify the ethical issues	
<input type="text"/>	

## Documents

List all amended documents to be reviewed.

Document Title (include version number, if applicable)	Version Date	Office Use Only

Attach one copy of each amended document to this form; all changes must be clearly indicated on the document(s).

## Sponsor

Did a commercial sponsor initiate this amendment?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Sponsor	<input type="text"/>	Email	<input type="text"/>
Contact Person (Australia)	<input type="text"/>	Telephone	<input type="text"/>

## Drug/Device Research under the CTN Scheme

If this is a drug/device research project, does the amendment include additional and/or different drugs/devices or involve a new indication for any drug/device other than that approved in the original application?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
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## Supporting Departments

Does this amendment impact the type or frequency of service provided by a supporting department at participating sites?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
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If Yes, indicate the relevant department(s)			
Anaesthesia <input type="checkbox"/>	EEG/EMG <input type="checkbox"/>	Medical Staff <input type="checkbox"/>	Pharmacy <input type="checkbox"/>
Anatomical Pathology <input type="checkbox"/>	Emergency <input type="checkbox"/>	Molecular Biology <input type="checkbox"/>	Physiotherapy <input type="checkbox"/>
Cardiology/ECG <input type="checkbox"/>	Endocrinology <input type="checkbox"/>	Nuclear Medicine <input type="checkbox"/>	Radiology <input type="checkbox"/>
Chemical Pathology <input type="checkbox"/>	Haematology <input type="checkbox"/>	Nursing Services <input type="checkbox"/>	Social Work <input type="checkbox"/>
Clinical Immunology <input type="checkbox"/>	Health Information <input type="checkbox"/>	Occupational Therapy <input type="checkbox"/>	Speech Pathology <input type="checkbox"/>
Clinical Pharmacology <input type="checkbox"/>	Interpreter Services <input type="checkbox"/>	Ophthalmology <input type="checkbox"/>	Tissue Typing <input type="checkbox"/>
Other (please specify) <input type="checkbox"/>	<input type="text"/>		

Provide written approval from the relevant department(s) to the Research Governance Officer at the relevant site(s).

## Participating Sites

Are all participating sites affected by this amendment?

☐ Yes

☐ No

*If No, list all affected sites below.*

Site (Organisation)	State

Site (Organisation)	State

*An amendment to ethically approved research may also impact the SSAs. The Research Governance Officer (RGO) at each affected site (named above) must be notified of the HREC amendment by their site PI to determine if the SSA needs to be amended. Final approval to implement an amendment at a site will be issued by that site's RGO.*

## Declaration

I confirm that this project is being conducted in keeping with the conditions of approval of the reviewing HREC (and subject to any changes subsequently approved).

I confirm that the project is being conducted in compliance with the NHMRC *National Statement on Ethical Conduct in Human Research* (NHMRC, 2007) or as amended.

I confirm that I have not received any information in any form from anyone involved in the trial to suggest this report does not accurately reflect the progress of the project at the above site(s).

CPI	
Signature	
Date	
Organisation	
Email	
Telephone	

Trial Coordinator	
Signature	
Date	
Organisation	
Email	
Telephone	

## **Appendix F    La Trobe University: Ethics approval for the RUBY RCT**

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**MEMORANDUM**

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**To:** Professor Della Forster, Mother and Child Health Research, FHS  
Ms Heather Grimes, Mother and Child Health Research, FHS

**From:** Secretary, La Trobe University Human Ethics Committee

**Subject:** Review of Human Ethics Committee Application No. 12-082

**Title:** *RUBY: Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding*

**Date:** 15 October 2012

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Thank you for your recent correspondence in relation to the research project referred to above. The project has been assessed as complying with the *National Statement on Ethical Conduct in Human Research*. I am pleased to advise that your project has been granted ethics approval and you may commence the study.

**The project has been approved from the date of this letter until 30 September 2015.**

**Special note – The UHEC recommends that the Participant Information Statement reinforces the existing supports available to new mothers in order to reduce the disadvantages to the control group participants.**

*Please note that your application has been reviewed by a sub-committee of the University Human Ethics Committee (UHEC) to facilitate a decision about the study before the next Committee meeting. This decision will require ratification by the full UHEC at its next meeting and the UHEC reserves the right to alter conditions of approval or withdraw approval. You will be notified if the approval status of your project changes. The UHEC is a fully constituted Ethics Committee in accordance with the National Statement on Ethical Conduct in Research Involving Humans- March 2007 under Section 5.1.29.*

The following standard conditions apply to your project:

- **Limit of Approval.** Approval is limited strictly to the research proposal as submitted in your application while taking into account any additional conditions advised by the UHEC.
- **Variation to Project.** Any subsequent variations or modifications you wish to make to your project must be formally notified to the UHEC for approval in advance of these modifications being introduced into the project. This can be done using the appropriate form: *Ethics - Application for Modification to Project* which is available on the Research Services website at [http://www.latrobe.edu.au/research-services/ethics/HEC\\_human.htm](http://www.latrobe.edu.au/research-services/ethics/HEC_human.htm). If the UHEC considers that the proposed changes are significant, you may be required to



submit a new application form for approval of the revised project.

- **Adverse Events.** If any unforeseen or adverse events occur, including adverse effects on participants, during the course of the project which may affect the ethical acceptability of the project, the Chief Investigator must immediately notify the UHEC Secretary on telephone (03) 9479 1443. Any complaints about the project received by the researchers must also be referred immediately to the UHEC Secretary.
- **Withdrawal of Project.** If you decide to discontinue your research before its planned completion, you must advise the UHEC and clarify the circumstances.
- **Annual Progress Reports.** If your project continues for more than 12 months, you are required to submit an *Ethics - Progress/Final Report Form* annually, **on or just prior to 12 February**. The form is available on the Research Services website (see above address). Failure to submit a Progress Report will mean approval for this project will lapse. An audit may be conducted by the UHEC at any time.
- **Final Report.** A Final Report (see above address) is required within six months of the completion of the project or by **31 March 2016**.

If you have any queries on the information above or require further clarification please contact me through Research Services on telephone (03) 9479-1443, or e-mail at:  
**humanethics@latrobe.edu.au**.

On behalf of the University Human Ethics Committee, best wishes with your research!

Ms Barbara Doherty  
Administrative Officer (Research Ethics)  
University Human Ethics Committee  
Research Compliance Unit / Research Services  
La Trobe University Bundoora, Victoria 3086  
P: (03) 9479 – 1443 / F: (03) 9479 - 1464  
[http://www.latrobe.edu.au/research-services/ethics/HEC\\_human.htm](http://www.latrobe.edu.au/research-services/ethics/HEC_human.htm)

## **Appendix G Letter of approval for ethics amendment (La Trobe University)**

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**Research Services  
Human Research Ethics**

**MODIFICATION FORM  
FOR HUMAN RESEARCH STUDIES**

<b>1. HEC Approval Number and Project Title:</b>	HEC12-082 Ringling Up about Breastfeeding: a randomised controlled trial exploring earlyY telephone peer support for breastfeeding: RUBY	
<b>2. Chief Investigator / Supervisor:</b> (academic staff members only)	Name: Della Forster Position: Professor of Midwifery and Maternity Services Research Judith Lumley Centre Faculty of Health Sciences	
<b>Student</b> (if appropriate)	Name: Heather Grimes Course of Study: PhD Department / School: Judith Lumley Centre Faculty of Health Sciences	
<b>3. Project Duration:</b> (subject to annual review)	Project commenced:  15/10/2012	Project concludes:  30/09/2015

**PLEASE NOTE THAT THE MODIFICATIONS PROPOSED IN THIS FORM MUST NOT COMMENCE WITHOUT PRIOR WRITTEN APPROVAL FROM THE UHEC OR RELEVANT FHEC**

**4 MODIFICATIONS PROPOSED:** modifications may include minor changes to the study, such as the aims, direction, procedures, personnel, duration, recruitment methods or numbers of participants, in addition to alterations of support documents. **Please itemise the changes you are requesting.** For new personnel please complete an Investigator Template (at the end of this form) for each new investigator. The UHEC or appropriate FHEC will review the proposed modifications and reserve the right to determine if a new application is required.

This project is a randomised controlled trial (RCT) exploring whether telephone support in the first six months postpartum, provided by volunteers who have breastfed, increases the proportion of infants who are receiving any breast milk at six months of age. When the women volunteered for this study they were informed that we were likely to be in touch with them at some point to find out their views of volunteering, and that anything regarding this aspect would be completely voluntary. They will not therefore be surprised to receive an invitation to provide feedback on their experiences volunteering in this study.

We are thus applying for ethics approval for an addition to the original study protocol.

We are seeking approval to survey and interview the women who have volunteered to provide support to mothers who are the research participants in the RCT. Volunteers will be invited by email (**see Appendix 1**) to complete an online questionnaire (**Appendix 2**) when they finish participating in the

project. For some volunteers this will be after providing support to only one breastfeeding mother, and for others it may be after providing support to a number of women. Responses to the survey will be anonymous and all responses will come directly to the RUBY research team at Judith Lumley Centre via an online survey. Consent will be implied by completion of the survey. Reminder emails (**Appendix 3**) will be sent to all participants at one week and three weeks following the initial email invitation, as we will not know who has or has not replied; completed questionnaires will not identify the participant. It will be made very clear this is voluntary.

If women want to participate in a subsequent focus group interview that will explore their experience as a volunteer in more depth, they will be asked to email the volunteer coordinator directly (i.e. Heather Grimes, the PhD candidate). The date and time of the focus groups will be given if women respond and wish to participate. The number of focus groups will depend on the interest expressed by volunteers. Those who are happy to participate and attend the focus group will sign a consent form on the day (**Appendix 4**). A participant information sheet will state that participation is voluntary and their decision to not participate in the focus group will not affect in any way their relationship with the RUBY study (**Appendix 5**). Focus groups will be audio recorded with participants' permission to ensure the accuracy of notes, they will be transcribed and a thematic analysis will be used for data analysis. A focus group guide is included here (**Appendix 6**)

Participants will be informed that the results from this study may appear in academic publications, reports to the RUBY research team and presented at conferences, and that no individuals will be identified.

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- 5 REASONS FOR THE MODIFICATIONS:** please summarise your reasons for requesting the above changes and indicate whether to date, any ethically significant incidents have arisen or any complaints have been received in connection with this project.

This data will be used to evaluate the experience of volunteers providing peer support in a randomised controlled trial and will also increase our understanding of the sustainability of peer support models in the health setting. The questionnaire and focus groups will maximise our ability to provide a meaningful descriptive account of peer support from the volunteer's perspective. We do not consider there are any ethically significant issues related to this request, and as stated, there is no obligation for volunteers to participate.

#### Investigator Template:

<b>Investigator: For database purposes please ensure that all details are up to date and correct.</b>			
Name:	Della Forster	Phone:	03 5448 9199
School/Inst	Judith Lumley Centre Faculty of Health Sciences	Email:	d.forster@latrobe.edu.au
		Staff No:	417976
Academic Title / Qualification:	Lecturer in Midwifery	Student No:	
		Signature	
Position / Other Affiliations Relevant to this Application. If Student provide Details on Level	PhD candidate, Judith Lumley Centre, LTU		

<b>Investigator: For database purposes please ensure that all details are up to date and correct.</b>			
Name:	Heather Grimes	Phone:	03 5448 9199
School/Inst	Judith Lumley Centre Faculty of Health Sciences	Email:	h.grimes@latrobe.edu.au
		Staff No:	33500
		Student No:	

Academic Title / Qualification:	Lecturer in Midwifery, MMid	Signature	
Position / Other Affiliations Relevant to this Application. If Student provide Details on Level	PhD candidate, Judith Lumley Centre, LTU		

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**6 SUBMITTED BY:**

**Name:** Professor Della Forster

**LTU Title/Position:** Professor of Midwifery and Maternity Services Research

**Date:** 17<sup>th</sup> April 2014

**Telephone Number:** 9479 8783

**E-mail Address:** d.forster@latrobe.edu.au

**LODGING THIS FORM**

Please send the completed form via e-mail to the Committee that granted final approval to the study.

Contacts for the relevant **Faculty Human Ethics Committee** (FHEC) are found on the La Trobe web page: <http://www.latrobe.edu.au/researchers/starting-your-research/human-ethics>

Or for the **University Human Ethics Committee** (UHEC) email to: [humanethics@latrobe.edu.au](mailto:humanethics@latrobe.edu.au)

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## Appendix 1



ringing up about  
**breastfeeding**

Dear RUBY Volunteer,

The RUBY Research Team would like to thank you for your involvement in providing new mothers with breastfeeding support. We appreciate that this is a busy time in your lives and we value the time you have committed to the RUBY study.

An important part of the study is to evaluate your experiences as RUBY volunteers. This will assist us to identify any aspects of your experience that might need to be addressed within this study, as well as help us develop future programs that offer telephone support to breastfeeding mothers.

We would greatly appreciate it if you would complete a questionnaire for us. The answers you provide will give us valuable insights into your experience. The questionnaire is completely anonymous and there is no means of identifying respondents. The questionnaire can be accessed by following the link below. It will take you approximately 10 - 15 minutes. Your participation in this survey is completely voluntary.

[link inserted here]

You will be able to access the questionnaire until [date to be inserted]

We would also be happy to post you a copy of the questionnaire if you would prefer to complete it in hardcopy. To discuss this questionnaire further, do not hesitate to call Heather Grimes on 0429 048 530 or Fiona McLardie-Hore on (03)8345 2932 or email [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)

A final request – we are planning to conduct a number of focus groups with volunteer mothers (in addition to the survey), so if you would be interested in being in one of these, please let us know by replying to this email. Again, this is completely voluntary, so feel free not to participate.

The results from this study may appear in academic publications, reports to the RUBY research team and presented at conferences, but no individuals will be identified. If you would like a copy of the study results, please send your name and details by return email. This information will not be linked to your survey.

Yours sincerely,

The RUBY study team

## Appendix 2

Date \_\_/\_\_/\_\_



ringing up about  
**breastfeeding**

## **The RUBY study**

# **A survey about your experiences as a volunteer**

### **Thank you again for being a part of the RUBY study**

We are interested in your views and experiences of being a volunteer no matter what they are – there are no right or wrong answers

The survey will take you about 15 to 20 minutes to complete. If there are any questions you would prefer to not answer that is fine – just move on to the next question.

## Section one: Your experiences of making RUBY calls

**1** In total, how many mothers did you support during your time as a RUBY volunteer?

Mother(s)

**2** In general, the RUBY call schedule required weekly calls for the first 12 weeks and then 3-4 weekly calls until the period of support is completed at six months. How closely were you able to follow this schedule?

- ☐<sub>1</sub> I followed the call schedule most of the time  
☐<sub>2</sub> I followed the call schedule some of the time  
☐<sub>3</sub> I rarely followed this schedule  
☐<sub>4</sub> I was unable to follow the schedule

**3** Can you please describe some of the reasons that influenced whether or not you could follow the call schedule?

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**4** The RUBY protocol states that contact with mothers should continue up to six months. Can you tell us how many mothers you were able to maintain contact with for the full six months?

- Mother(s)  
☐ I was unable to support any mother for six months

**5** Can you recall what was the shortest length of time you supported a mother? (write number of days OR weeks, if applicable, in box provided)

- <sub>1</sub> (days(s)) **OR**  
<sub>2</sub> (weeks(s))  
<sub>3</sub> I was unable to make any contact after allocation (skip to question 7)



6 If you supported a woman for less than six months, can you tell us some of the reasons for this? ☐

*(please, tick all that apply)*

☐<sub>1</sub> The mother requested no more calls

☐<sub>2</sub> I was unable to contact the mother

☐<sub>3</sub> I was not able to continue to provide support

☐<sub>4</sub> Other. Please describe:

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7 Overall, how did you feel about the length of time you were asked to support a mother in the RUBY study (i.e. six months)? ☐

☐<sub>1</sub> About right

☐<sub>2</sub> Too long

☐<sub>3</sub> Too short

☐<sub>4</sub> Other, please comment:

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8 Overall, how did you feel about the frequency of the calls? ☐

☐<sub>1</sub> About right

☐<sub>2</sub> Too often

☐<sub>3</sub> Not enough

☐<sub>4</sub> Other, please comment

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9 Did you ever feel uncomfortable while supporting a mother? ☐

☐<sub>1</sub> Yes

☐<sub>2</sub> No

Would you like to comment on your answer to question 9?

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10 Did you ever feel disappointed while supporting a mother? ☐

☐<sub>1</sub> Yes

☐<sub>2</sub> No

Would you like to comment on your answer to question 10?

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## Section two: Your experiences as a volunteer

10 We are interested in your views and experiences of being a volunteer. These questions are used to assess the impact volunteering has on you. Using the 7 – point scale below please indicate the amount of agreement or disagreement you personally feel with each statement

		Strongly disagree				Strongly agree		
		1	2	3	4	5	6	7
10.1	In volunteering for the RUBY study, I made new contacts that might help my career							
10.2.	My friends and family know that I am volunteering for the RUBY study							
10.3	People I am concerned about are being helped by me volunteering for RUBY							
10.4	From volunteering for RUBY, I feel better about myself							
10.5	Volunteering with RUBY has helped me escape some of my own troubles							
10.6	I have learned how to deal with a greater variety of people through volunteering for the RUBY study							

10.7	As a volunteer for RUBY, I have been able to explore possible career options	1	2	3	4	5	6	7
10.8	People I'm close to value the fact that I am volunteering	1	2	3	4	5	6	7
10.9	Through volunteering for RUBY, I am doing something for a cause that I believe in	1	2	3	4	5	6	7
10.10	Volunteering makes me feel needed	1	2	3	4	5	6	7
10.11	By volunteering for RUBY, I have been able to work through some of my own personal problems	1	2	3	4	5	6	7
10.12	I have been able to learn more about the importance of breastfeeding support by volunteering with RUBY	1	2	3	4	5	6	7
10.13	I am enjoying my volunteer experience	1	2	3	4	5	6	7
10.14	My volunteer experience has been personally fulfilling	1	2	3	4	5	6	7
10.15	This experience of volunteering with RUBY has been a worthwhile one	1	2	3	4	5	6	7
10.16	I have been able to make an important contribution by volunteering with RUBY	1	2	3	4	5	6	7
10.17	I have accomplished a great deal of 'good' by volunteering with the RUBY study	1	2	3	4	5	6	7
10.18	One year from now I will be volunteering for an organisation	1	2	3	4	5	6	7
10.19	I would volunteer to provide telephone support if a program like RUBY was offered in the future	1	2	3	4	5	6	7
10.20	I would recommend the type of telephone support provided in the RUBY study to new mothers	1	2	3	4	5	6	7
11	One year from now, will you be (please circle your best guess as of today):	<input type="checkbox"/> 1	Volunteering with RUBY					<input type="checkbox"/>
		<input type="checkbox"/> 2	Volunteering at another organisation					
		<input type="checkbox"/> 3	Not volunteering at all					
		<input type="checkbox"/> 4	I don't know					

Would you like to make any comments about your answer to question 11?

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## Section three: The support you received as a volunteer

13 The following statements relate to aspects of the support you received as a RUBY volunteer. We would like to know if you agree or disagree with these views.

		Disagree strongly	Disagree	Neither agree or disagree	Agree	Agree strongly
13.1	The RUBY team were approachable	1	2	3	4	5
13.2	I could contact the RUBY volunteer coordinator as often as I needed	1	2	3	4	5

13.3	My concerns were taken seriously by the RUBY team	1	2	3	4	5
13.4	I was able to provide feedback about the program	1	2	3	4	5
13.5	The program is relevant to the needs of breastfeeding women	1	2	3	4	5
13.6	I felt valued by the RUBY research team	1	2	3	4	5
13.7	I felt positive about being a part of RUBY	1	2	3	4	5
13.8	I found the call log easy to use	1	2	3	4	5
13.9	I found the training manual a useful resource	1	2	3	4	5
13.10	The training session prepared me well for the role	1	2	3	4	5
13.11	I felt supported by the RUBY team during my time as a volunteer	1	2	3	4	5
13.12	I would have liked ongoing training sessions during my time as a RUBY volunteer	1	2	3	4	5
14	Did you attend the RUBY social 'get-togethers'?	<input type="checkbox"/>				
	<input type="checkbox"/> 1 Yes					
	<input type="checkbox"/> 2 No					
	<input type="checkbox"/> 3 Can't recall					
	<input type="checkbox"/> 4 I didn't know about them					
15	Do you have any comments about the RUBY social 'get-togethers'?	<hr/> <hr/> <hr/> <hr/> <hr/>				

## Section four: Questions about you

16	How old are you? _____ years	<input type="checkbox"/> <input type="checkbox"/>
17	Are you .....	<input type="checkbox"/>
	<input type="checkbox"/> 1 Married	
	<input type="checkbox"/> 2 Living with your partner	
	<input type="checkbox"/> 3 Have a partner but do not live together	
	<input type="checkbox"/> 4 Separated or divorced	
	<input type="checkbox"/> 5 Widowed	
	<input type="checkbox"/> 6 Single	

**18 What is the highest level of education you have completed?** ☐

- ☐1 Completed a Degree or higher
- ☐2 Completed Diploma or certificate
- ☐3 Completed secondary school to Year 12 (or equivalent)
- ☐4 Did not complete secondary school

**19 Which of the following best describes your current employment?** ☐

- ☐1 Employed full-time
- ☐2 Employed part-time
- ☐3 Maternity leave
- ☐4 Home duties
- ☐5 Pensioner/ in receipt of government benefits
- ☐6 Student fulltime
- ☐7 Student part-time
- ☐8 Other (please describe)

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**20 What is the total BEFORE tax income of your household (all family members living at home) usually receives?** ☐

- ☐1 Less than \$350 per week (less than \$18,200 per year)
- ☐2 \$350 - \$649 per week (\$18,200 - \$33,799 per year)
- ☐3 \$650–\$999 per week (\$33,800–\$51,999 per year)
- ☐4 \$1000 - \$1399 per week (\$52,000-\$72,999 per year)
- ☐5 \$1400–\$1999 per week (\$72,800–\$103,999 per year)
- ☐6 More than \$2000 per week (\$104,000 or more per year)

**21 Is English your first language?** ☐

- ☐1 Yes
- ☐2 No (what is your first language?)

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## Section five: Questions about your breastfeeding experience

**22 How many children do you have?** ☐☐

☐☐ child(ren)

**23**    **What is the age of your youngest child?** *(Please indicate age in EITHER months or years)*    ☐☐ months

☐<sub>1</sub>    6-12 months

☐<sub>2</sub>    12-18 months

☐<sub>3</sub>    18-24 months

☐<sub>4</sub>    24-36 months

☐<sub>5</sub>    3-5 years

☐<sub>6</sub>    5-10 years

☐<sub>4</sub>    More than 10 years

**24**    **How many children have you breastfed?**    ☐☐

☐☐ child(ren)

**25**    **How long was the longest you have breastfed any child (including giving expressed breast milk)?**    ☐☐

☐<sub>1</sub>    ☐☐ months

☐<sub>2</sub>    Not sure/ can't remember

**26**    **What is the total length of time you have breastfed in your life, adding up all the months you breastfed individual children (including giving expressed breast milk)?**    ☐☐

☐<sub>1</sub>    ☐☐ months

☐<sub>2</sub>    Not sure/ can't remember

**27**    **Looking back, did you breastfeed your first child for as long as you had planned?**    ☐

☐<sub>1</sub>    Yes, I think I achieved my goals

☐<sub>2</sub>    No, I did not breastfeed for as long as I would have liked

☐<sub>3</sub>    No, I breastfed for longer than I planned

☐<sub>4</sub>    I planned to breastfeed for as long as I could

☐<sub>5</sub>    Not sure/ can't remember

☐<sub>6</sub>    I didn't have a plan/ set idea

☐<sub>7</sub>    I did not breast feed my first child at all

☐<sub>8</sub>    Other, comments:

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28      **Thinking back, how well supported did you feel during your first month of breastfeeding?** (please circle one) ☐

<b>I felt very well supported</b>					<b>I didn't feel supported during this time</b>	
1	2	3	4	5	6	7

Please feel free to make comments...

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- 29      **Would you be happy for us to contact you if we need to clarify or check any of the information you have provided? This is completely up to you. If so, please write your first name and phone number in the space below. We won't pass this information on to anyone else.**

**Thank you very much for completing this questionnaire. We are grateful for the time you have taken.**

**We would also like to thank you for participating in the RUBY study. We could not undertake this study without your support and your participation at this busy time in your life is greatly appreciated.**

**If you have any questions regarding this questionnaire, please contact:**

**Heather Grimes,  
RUBY volunteer coordinator,  
La Trobe Rural Health School  
PO Box 199,  
Bendigo,  
Vic, 3552**

**03 5448 9113**

**[Ruby.study@thewomens.org.au](mailto:Ruby.study@thewomens.org.au)**





ringing up about  
breastfeeding

## Appendix 3

### **Email reminder – to be sent one and three weeks after the original invitation.**

The RUBY research team hopes that all is going well for you and your family.

You may recall receiving a questionnaire by email a couple of weeks ago which asked about your views and experiences of volunteering in the RUBY study. If you have already completed the questionnaire, we would like to say thank you for the time and trouble you have taken in participating in the study.

We understand how busy you may be, but if you haven't completed the questionnaire yet, we would be most grateful if you could follow the link and spend approximately 10 – 15 minutes completing it.

We would also be happy to send you a summary of the study results if you would like. If so, please send your name and details by return email. This will not be linked to your survey.

If you would like to discuss this questionnaire further, do not hesitate to call on 0429 048 530 and discuss it with Heather.

Yours sincerely

Heather Grimes

Heather Grimes,  
Volunteer Coordinator,  
The RUBY study,  
La Trobe University  
Email: [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)  
Phone:

## Appendix 4

**Consent Form:** Volunteer's focus groups

Version 1 16th April 2014

Full Project Title: An evaluation of maternity services changes at Barwon Health

I have read, or have had read to me, and I understand the participant information sheet and consent form and any questions that I asked have been answered to my satisfaction. I agree to participate in the project, realising that I may withdraw at any time and may request that no data arising from my participation is used, up to four weeks following the completion of my participation in the research. I understand that interviews will be taped and transcribed. I agree that research data provided by me or with my permission during the project may be included in a thesis, presented at conferences and published in journals on the condition that neither my name nor any other identifying information is used.

Participant's Name (block letters) .....

Signature.....Date.....

Researcher's Name (printed) .....

Signature.....

Date.....

*Note:* Both parties signing the Consent Form must date their own signature.

**Revocation of Consent Form: Volunteer's focus groups**

Version 1 16/04/2014

Full Project Title: Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding: RUBY Health

I hereby wish to WITHDRAW my consent to participate in the research proposal named above and understand that such withdrawal WILL NOT jeopardise my relationship with the RUBY study team.

Participant's Name (block letters) .....

Signature.....

Date.....

# Appendix 5

## Participant Information Sheet: RUBY Volunteer focus groups

Version 1 16<sup>th</sup> April 2014

**Full Project Title:** Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding: RUBY

**Principal Researchers:** Professor Della Forster, Associate Professor Helen McLachlan, Dr Mary-Ann Davey, Associate Professor Lisa Amir, Dr Lisa Gold, Professor Rhonda Small

**Location:** The Royal Women's hospital, Flemington road, Parkville

This Participant Information and Consent Form is 5 pages long. Please make sure you have read all the pages.

### 1. Your Consent

You are invited to participate in a research study entitled "*Focus groups to explore the experiences of volunteers providing telephone support to breastfeeding mothers in the RUBY study*"

This Participant Information contains detailed information about the research project. Its purpose is to explain to you as openly and clearly as possible all the procedures involved in this project before you decide whether or not to take part in it.

Please read this Participant Information carefully. Feel free to ask questions about any information in the document. You may also wish to discuss the project with a relative, friend or colleague. Feel free to do this.

Once you understand what the project is about and if you agree to take part in it, you will be asked to sign the Consent Form and return to the research team in the provided stamped, pre-addressed envelope. By signing the Consent Form, you indicate that you understand the information and that you give your consent to participate in the research project.

You will be given a copy of the Participant Information and Consent Form to keep as a record.

### 2. Purpose and Background

Telephone support from another mother with breastfeeding experience has been found to increase breastfeeding in other countries. The aim of the RUBY study is to find out whether providing breastfeeding support by telephone from another mother who has herself successfully breastfed for six months or more could increase the percentage of women breastfeeding for at least six months. The purpose of the focus groups is to explore your experience of providing support to a new mother. This will enhance our understanding of factors that impact volunteers providing this intervention.

### 3. Procedures

If you choose to be involved in this part of the study, you will be involved in a focus group interview of about one hour. The focus groups will take place at a time that enables maximum

HEC July 2013

participation of those volunteers who have expressed an interest. The focus group interviews will be tape recorded with your permission and transcribed. After completing and returning the consent form arrangements for the focus group, a time and date can be arranged.

#### **4. Possible Benefits**

You will be given the opportunity to discuss your views and experiences of providing telephone support in the RUBY study, which you may find beneficial.

#### **5. Possible Risks**

We don't anticipate that this study will involve any risks for you.

#### **6. Privacy, Confidentiality and Disclosure of Information**

Information will be stored in locked filing cabinets in a secure office. Only the project coordinator and project investigators will have access to the information. Electronic information will be password protected.

Any information we collect will be retained for 23 years after we have published information from the study in accordance with 2.1.1 of the Australian Code for the Responsible Conduct of Research (2007), which suggests data from clinical trials be kept for this period. All data will then be destroyed in a secure manner.

Any information obtained that can identify you will remain confidential. It will only be disclosed with your permission, except as required by law – however we do not anticipate this will be the case. If you give us your permission by signing the Consent Form, we plan to publish the results in relevant professional journals. In any publication, information will be provided in such a way that you cannot be identified. Your privacy will be maintained. A false name will be used for any direct quotes used

#### **7. Results of Project**

This study will provide important information about the effect of telephone support provided to breastfeeding mothers by mothers who have themselves breastfed successfully. We will also explore how women feel about this sort of telephone support, and find out how it was for those mothers who volunteered to help with the study by becoming RUBY volunteer mothers.

A summary of the project findings will be mailed to you once the project is completed if you would like this to occur.

#### **8. Further Information or Any Problems**

If you require further information or if you have any problems concerning this project you can contact any of the following:

Volunteer Coordinator: Heather Grimes: 0429 048 530

Project Coordinator: Fiona McLardie-Hore: 03 8345 2932, or

Chief Investigator: Professor Della Forster: 03 9

#### **9. Other Issues**

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Secretary, Human Ethics Committee, Research Services, La Trobe University, Victoria, 3086, (ph: 03 9479 1443, e-mail: [humanethics@latrobe.edu.au](mailto:humanethics@latrobe.edu.au)). Please quote UHEC

application reference number HEC12-082.

*Alternatively you may contact:*

The Consumer Advocate  
Royal Women's Hospital  
Telephone: 03 8345 2900

## **10. Participation is Voluntary**

Participation in this project is voluntary. If you do not wish to take part you are not obliged to.

You have the right to withdraw from active participation in this project at any time and further, to demand that data arising from your participation is not used in the research project provided that this right is exercised within four weeks of the completion of your participation in the project. You are asked to complete the 'Revocation of Consent Form' or to notify the researcher by email or telephone that you wish to withdraw your consent for your data to be used in this research project.

Before you make your decision, a member of the research team will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

## **11. Ethical Guidelines**

This project will be carried out according to the National Statement on Ethical Conduct in Human Research, 2007 produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

The ethical aspects of this research project have been approved by the Human Research Ethics Committee of La Trobe University and the hospitals involved in the trial.

If you have any questions or concerns regarding the study, please feel free to contact myself at any time on the number provided.

Thank you for considering participating in this study.

# **Appendix 6**

## **RUBY Volunteer focus groups: Outline of process and questions**

Version 1 16th April 2014

**Location: The Royal Women's hospital, Flemington road, Parkville**

### **Introduction:**

- Welcome to the group participants and introductions
- Purpose and context of the focus group:
  - You have been involved in providing telephone support to new mothers as part of the RUBY study. The purpose of this focus group is to explore your experience of providing support to a new mother. This will enhance our understanding of factors that impact volunteers providing this intervention.
  - The data collected in the discussion today will be used to develop and understanding of factors that enhanced or detracted from your experience as a volunteer
  - As detailed in the consent form, everything that is said in this group will be confidential. Thank you for your permission to audio tape the discussion. In any written information that arises from this group, you will not be identified and we will use pseudonyms for any direct quotes used.
  - I have a series of questions to ask you. The first questions are about your experiences and the following about your views of telephone support.

<b>Themes</b>	<b>Prompts</b>
Tell me about making your first call to a volunteer	Preparation for calls, introductions, making contact, topics discussed
How did the subsequent calls go?	Relationship, rapport, making contact, using the call log
How did you find the duration of support	Ending support, could support period be longer or shorter.
Do you have any comments on providing telephone support for encouraging breastfeeding?	Volunteer support, management issues, reimbursement

### **To close:**

- Thanking participants
- The data collected in the discussion today will be used to help provide important information about your experience as a RUBY volunteer. The results of the study will be available to you on request and may be presented at conferences or in academic journals.





11 October 2012

Professor Della Forster  
Mother & Child Health Research  
La Trobe University  
215 Franklin Street  
Melbourne Vic 3000

Dear Professor Forster

**Study title: RUBY: Ringing Up about Breastfeeding: A Randomised Controlled Trial Exploring Early Telephone Peer Support for Breastfeeding**

**Southern Health HREC Ref: 12251B**

The Southern Health HREC B reviewed the above application at the meeting held on 16 August 2012. In addition, the HREC is satisfied that the responses to our correspondence of 21 August 2012 have been sufficiently addressed.

The HREC approved the above application on the basis of the information provided in the application form, protocol and supporting documentation.

This reviewing HREC is accredited by the Consultative Council for Human Research Ethics under the single ethical review system.

**Approval**

The HREC and Site Specific Authorisation approval is from 11 October 2012

Approval is given in accordance with the research conforming to the *National Health and Medical Research Council Act 1992* and the *National Statement on Ethical Conduct in Human Research (2007)*. The HREC has ethically approved this research according to the Memorandum of Understanding between the Consultative Council and the participating organisations conducting the research.

Approval is given for this research project to be conducted at the following sites and campuses:

Southern Health, Monash Medical Centre, Clayton Campus

You must comply with the following conditions:

The Chief Principal Investigator is required to notify the Administrative Officer, Research Directorate, Southern Health of:

1. Any change in protocol and the reason for that change together with an indication of ethical implications (if any)
2. Serious or unexpected adverse effects of project on subjects and steps taken to deal with them
3. Any unforeseen events that might affect continued ethical acceptability of the project
4. Any expiry of the insurance coverage provided in respect of sponsored trials
5. Discontinuation of the project before the expected date of completion, giving reasons
6. Any change in personnel involved in the research project including any study member resigning from Southern Health &/or the study team.

At the conclusion of the project or every twelve months if the project continues, the Principal Investigator is required to complete and forward an annual report to the Committee.

Annual report forms will be forwarded to the researcher.

### **Approved documents**

Documents reviewed and approved at the meeting were:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Participant Information and Consent Form	2	23 August 2012
Recruitment Interview	1	1 July 2012
Process Evaluation – Intervention Interview	1	1 July 2012
Volunteer Flyer		

If you should have any queries about your project please contact Deborah Dell or Julie Gephart by email [deborah.dell@southernhealth.org.au](mailto:deborah.dell@southernhealth.org.au) / [julie.gephart@southernhealth.org.au](mailto:julie.gephart@southernhealth.org.au)

The HREC wishes you and your colleagues every success in your research.

Yours sincerely

**Dr James Doery**  
**Medical Administrator HREC**

## **Appendix I     Western Health ethics approval**

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**WESTERN HEALTH LOW RISK HUMAN RESEARCH ETHICS PANEL  
APPROVAL TO CONDUCT RESEARCH AND  
SITE SPECIFIC ASSESSMENT (SSA) AUTHORISATION**

03 September 2012

Professor Della Forster  
Mother & Child Health Research  
La Trobe University  
215 Franklin Street  
MELBOURNE VIC 3000

Dear Professor Forster,

**HREC Project Number:** HREC/12/WH/107

**Project Title:** Ringing Up about Breastfeeding: A Randomised Controlled Trial Exploring Early Telephone Peer Support for Breastfeeding

**HREC Approval Date:** 31 August 2012

**SSA Approval Date:** 31 August 2012

**Site(S) Approved:** Sunshine Hospital

I am pleased to advise that the above project has been given ethics approval by the Western Health Low Risk Ethics Panel.

This project has also been issued with site specific approval to be conducted at Western Health.

**Approved Documents:**

- NEAF version 2.0 (2008) dated 04 July 2012
- Victorian Specific module version June 2012
- Patient information consent form version 2 dated 17 August 2012
- Protocol
- Statement of Approval - Maternity Services Western Health
- Peer Support Volunteer Recruitment Flyer
- Volunteer Recruitment Flyer version1 dated July 2012
- RUBY Trial Recruitment Interview version 1 dated 01 July 2012
- RUBY Study Six Month Questionnaire version 1 dated 01 July 2012

You are required to notify the Office for Research of:

1. The actual start date of the project at Western Health.
2. Any unforeseen events.
3. Your inability to continue as Principal Investigator or any other change in research personnel involved in the project.
4. Any other matters which may impact the conduct of the project at Western Health.

You are also required to submit to the Office for Research:

1. Any proposed amendments to the project including any proposed changes to the Protocol and the Patient Information and Consent Form for review by the Panel.
2. An Annual Progress Report every 12 months for the duration of the project. This report is due on the anniversary of this approval. Ongoing approval for the project is contingent upon receipt of this report.
3. A comprehensive Final Report upon completion of the project.

The Office for Research may conduct an audit of the project at any time.

The Office for Research Western Health wishes you and your colleagues every success in your research.

Yours sincerely,

Dr Tam C. Nguyen PhD  
Manager  
Office for Research  
Western Health

## Appendix J RUBY volunteer screening form

Ruby Trial: Telephone screening form	
Date of contact:	Outcome (initial call):
Name:	
Contact details	Address:
	Telephone:
	Email
Breastfeeding experience:	How many children have you BF?
	What age is your youngest child (that you BF)?
	How long did you BF your child/ren?
Are you an ABA counselor/ member?	
<p>Would you be available to contact a new BF mother that you will be matched with by telephone? You would contact her within one week of her discharge from hospital and then 3-4 days after the initial call, and then approximately weekly depending on the mother's wishes.</p>	
Would you be available to attend a 4 hour training session?	
Follow-up/ outcome	Date booked: Reason if declined:

## **Appendix K RUBY volunteer information manual**

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ringing up about  
**breastfeeding**

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**RUBY volunteer mothers'  
Information Manual**

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ringing up about  
**breastfeeding**

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## Section I: About the study

The RUBY study is a randomised controlled trial (RCT) which is exploring whether telephone support for breastfeeding (from a volunteer mother who has breastfed) increases the percentage of women giving their baby any breast milk at six months postpartum.

All mothers in the study will have had their first baby. They will be approached in the postnatal wards of the participating hospitals, and asked if they would like to take part in the study. , In a RCT, women are allocated by chance to one of two groups; this means that half of the new mothers enrolled in the study will receive telephone support from volunteers and half will receive normal postnatal care. All the women in the study will have access to the usual community and hospital supports for breastfeeding.

Your role in the study will be to ring up your allocated woman (or women) according to a schedule we have designed (described later). As a volunteer in the RUBY study, you will play a crucial role in helping us to evaluate whether getting telephone support from another mother with breastfeeding experience (your role as a RUBY volunteer mother) increases the number of babies who are breastfed for at least six months.

We (i.e. the researchers) will find this out by ringing up all the women in the study at the time their babies are six months old, to see how the feeding is going, and explore a range of issues related to infant feeding.

We will also be evaluating the telephone support that volunteers provide to women from the participants and the volunteer mothers' perspectives.

***You are very important to this study because you will be providing the telephone support.***

### ***Which organisations are involved in the study?***

The study is being jointly conducted by:

- Royal Women's Hospital (The Women's)
- Mother and Child Health Research, La Trobe University (LTU)
- Australian Breastfeeding Association (ABA)
- Sunshine Hospital
- Monash Medical Centre (MMC)

The research team includes:

- Professor Della Forster
- Associate Professor Helen McLachlan
- Dr Mary-Ann Davey

## RUBY volunteer mothers' information manual

Associate Professor Lisa Amir

Dr Lisa Gold

Professor Rhonda Small

Associate researchers are:

Ms Kate Mortensen (ABA)

Ms Nanette Shone (ABA)

Ms Anita Moorhead (The Women's)

Ms Patrice Hickey (Sunshine Hospital)

Ms Jenny Tenni (Sunshine Hospital)

Ms Fiona McLardie-Hore (The Women's)

Professor Cindy-Lee Dennis (Canada)

Professor Chris East (MMC)

Ms Heather Grimes (LTU)

The study is funded by the Felton Bequest and in part by a PhD scholarship from LTU.

### ***How many women will be involved?***

We will recruit about 1150 women to be research participants in the RUBY study; around half of these women will be allocated a volunteer mother who calls them regularly in the early weeks after the birth of their baby.

We are not sure how many volunteer mothers we will need – it will depend on how long women volunteer for, and how many RUBY study participants they take on at any one time.

It is anticipated that the study will run for approximately three years. Volunteer mothers may be involved for all or part of the time. For example, some RUBY mothers may wish to provide support to one new mother, whilst others will be involved with multiple women over the course of the study. **We ask that you commit to supporting at least one new mother for approximately 12 weeks after she has given birth.**

## Section II: Being a RUBY volunteer mother

### ***What will be expected of me?***

As a RUBY volunteer mother, you will provide empathy, encouragement and social support to new breastfeeding mothers by telephone. You are not expected to provide a solution to all of the mother's problems. However your own breastfeeding experience may enable you to support the woman's decisions, and to suggest alternative strategies or direct her to other resources. We will also provide you with a list of resources you can suggest to the women you are allocated to.

### ***Who can be a volunteer?***

Volunteers will be women who have successfully breastfed for at least six months, who are not trained breastfeeding counsellors, but who have a positive attitude to successful breastfeeding.

### ***What is the role of the volunteer coordinator?***

The volunteer coordinator will be responsible for matching volunteers with new mothers. She will also assist with reimbursement for expenses such as phone calls and address any concerns and issues raised by volunteers. Heather Grimes is the RUBY volunteer coordinator – and she is also undertaking her PhD looking at the RUBY study. Fiona McLardie-Hore is coordinating the study, and will also be available to answer any queries you might have. If they cannot address any of your concerns they will liaise with the research team members.

As a RUBY volunteer mother you will need to fill in some paperwork as part of your role. This will take the form of a **Call Log**, which we will ask you to complete as you go along with each of your study mothers that you support. The volunteer coordinator will give you this when you have a woman allocated to you. It will cover basics like date and length of calls and a general summary of the call (there will be tick boxes wherever possible to make this easier for you).

In order to reimburse you for the phone calls you make, you will be given \$50 per woman you take on. We aim to give you \$25 up front and then the other \$25 once you have handed in each completed Call Log. Heather will provide you with the information you will need to make sure this happens.

It is possible that you might also be asked to actually become a research participant yourself. Whenever we do research it is important to explore how all the key people feel about it, and in this case the RUBY volunteers are a really important group. So Heather may ask you at some time if you would be willing to 'sign up' and complete a survey about your role, and she will ask some of you if you would be interested in participating in an interview. These aspects will of course be voluntary.

**Volunteer and project coordinator contacts:**

**Heather Grimes – RUBY volunteer coordinator    Phone:**

**Fiona McLardie-Hore – RUBY project coordinator    Phone: 03 8345 2932**

**Email: [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)**

***Who will I contact if I no longer want to be involved in the study?***

Please contact the volunteer coordinator (Heather) by email ([rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)) or phone (0429 048 530) as soon as possible if you cannot continue to provide support for an allocated woman, or if you no longer want to take on new study mothers.

***What do I do when the period of support ends?***

Please notify the volunteer coordinator by email when the period of support ends for each woman. You will be asked to submit your Call Log and to indicate if you want to continue your participation in the study.

***Who will support me?***

Heather Grimes will be your main support and contact for the study. You are welcome to ring her or email her with any concerns or questions. Likewise you could ring Fiona McLardie-Hore. We plan to also have a get together every 6-8 weeks. Volunteer mothers can attend to chat about how they are going and get some face-to-face support from the research team as well as from other mothers. You are also welcome to come along to other RUBY volunteer mother training sessions if you feel you need a refresher.

## Section III: Getting connected – staying connected: developing a relationship with the new mother

### ***Getting connected***

New mothers will enrol in the RUBY study while they are in hospital following the birth of their babies. As new mothers enrol, you will be matched with a mother, and her name and phone number will be given to you by the volunteer coordinator. She will let you know when to make the first call. The new mother will be expecting your call.

We are aiming to make the first contact within 4-6 days of the new mother giving birth, after she has gone home. The focus of the first call will be to establish contact and ask how things are going. Give her an opportunity to talk about herself as well. Before you end the conversation let her know when you will call her again (within 3-4 days after the initial call).

### ***Staying connected***

The second contact should be made 3-4 days after the initial call. The aim of this call is to encourage breastfeeding and provide empathetic support. Remember the woman will be adjusting to life with her baby and may be finding that breastfeeding isn't 'easy'. Remind her that she may ring you if she would like more support and let her know when you will call again. Let her know if there are times that you would prefer not to be called, e.g. overnight. This promotes a positive connection and feelings of availability (and in a previous Canadian study like this women did not ring their volunteer mother very often).

You will probably find that you will communicate more often early in the relationship, and as the new mother starts to develop confidence, calls may be more infrequent.

You will call the new mother at weekly intervals (reduced to two weekly for women who prefer less contact) until the baby is 12 weeks old. From when the baby is three to six months old, you will continue with less frequent calls (three to four weekly).

If the mother expresses that she no longer requires your support, the support relationship will end. Tell her that you will stop calling but will be available if she ever needs to talk to someone in the future. Notify the volunteer coordinator – and send her your Call Log.



Below is a summary of the contact schedule

Summary of contact schedule	
Initial contact	<ul style="list-style-type: none"><li>• Volunteer rings the new mother with 4-6 days of birth</li></ul>
Second contact	<ul style="list-style-type: none"><li>• Volunteer rings new mother within 3-4 days after the initial call</li></ul>
Subsequent calls	<ul style="list-style-type: none"><li>• Weekly for first 12 weeks after birth unless mother prefers less contact</li><li>• Three to four weekly from 12 weeks to six months after birth</li></ul>
The volunteer mother will be available if the new mother wants to phone her between scheduled calls	

### ***How much time will it take to “stay connected”?***

The time commitment expected of you will vary depending on the mother(s) you are supporting. It is important that the support be tailored to her individual needs. You are NOT expected to speak to the mother for hours. Remember that the mother will need extra support initially but after the first couple of weeks, your time requirements will probably decrease. Some calls may only be a few minutes long, while others will be longer. Don't feel as though you have to have long phone calls to be effective. Record the length to the call in your **Call Log**.

The study mother should not feel as though she is “irritating” or “harassing” you if she calls you. “Perceived availability” depends largely on being approachable. Research has shown that knowing someone is available for support has greater benefits for many people than actually receiving support. That means that the mother will probably be satisfied with the time that you give her, as long as you are available, reliable, friendly, caring, and supportive.

### ***Developing a relationship with the mother***

Developing a relationship with the new mother is essential since the relationship will shape the actual support provided as well as the mother's perceptions of and expectations about, the support received. There are several ways to develop a meaningful relationship with the mother such as being responsive to her needs while developing feelings of closeness and connection.

## Section IV: Skills and techniques to effective telephone support

### What do we need to do?

#### RUBY volunteer mothers are trained to:-

- Offer support and help to breastfeeding mothers, via personal experiences and knowledge gained as a breastfeeding mother
- Offer information about appropriate breastfeeding services available to mothers in their local area
- Promote and encourage breastfeeding
- Respect mothers' decisions
- Keep information about mothers private
- Give out resource materials
- Refer mothers to breastfeeding support and other services
- Maintain contact with RUBY
- Record the calls you make in the *Call Log* that is provided to you

#### RUBY volunteer mothers are *not* expected to:-

- Solve family problems
- Tell mothers they must breastfeed



## ***Learning about respecting other people's values and cultural beliefs***

We all have beliefs and ideas about who we are and what we should do. Most of us find it hard if someone starts telling us that what we are doing is wrong or does not respect what we believe.

It is important for a peer support mentor to respect other people's practices and beliefs. Before learning this, we need to understand our own practices and beliefs.

### **ACTIVITY: Understanding our values and cultural beliefs**

1. Look at these pictures. How do they make you feel?
  
  
  
  
  
  
  
  
  
  
2. Discuss your feelings about the different pictures with the group.
  
  
  
  
  
  
  
  
  
  
3. Were your feelings different or the same as others?
  
  
  
  
  
  
  
  
  
  
4. What do you think might happen if you did not respect the values and cultural beliefs of the mothers you were mentoring?

## RUBY volunteer mothers' Information Manual



- Our values and beliefs around infant feeding influence us.
- We may accidentally put our own values on the mother. This is not showing respect.
- We need to clarify our own values, so we can respect those of other people.

## RUBY volunteer mothers' Information Manual

Because we are immersed in our cultural belief systems and are products of a society with particular biases, we may not realize that sometimes what we regard as value neutral statements can without our intention contain hidden value judgments.

For example – If our parents value books and read to us often as children, we will value books. If our parents follow a particular football team and take us to the game each week, we will probably develop a love of the game and the team.

If we see all our sisters, friends and cousins breastfeeding, we believe that breastfeeding is a normal way to feed a baby.

### OUR OWN EXPERIENCE!

Use it

- \* Set aside your values
- \* Work with the mother, where *SHE* is at
- \* There is no one right way.

### ***Learning about mentoring breastfeeding mothers***

A peer support mentor needs to learn how to help a mother without telling her what to do. Some mothers just need encouragement and others need support and breastfeeding information. Others may need extra help for problems and will ask you where to get it.

Telling people what to do and being the one who always knows best just makes other people not listen.

A mentor always tries to get mothers to work out what is best for their baby and family.

To do this a mentor needs to listen well and hear what a mother is really saying. Mentors need to talk to mothers in a language they understand.

Mentors respect mothers' values and cultural beliefs even when they do not agree with them.

## ***Language — What are we really saying?***

**We work with mothers at a very important and vulnerable stage of their lives. What we say makes a difference!**

Acknowledge vulnerabilities – learning to look after baby, other children, tired, depressed, in pain etc.

For example – *‘Do you really want to do that?’* will automatically put the mother (or family) on the defensive.

Saying instead *‘That sounds like something your family can do to be helpful – another thing you could do is ...’*

### **Use positive language**

To build confidence in the mother

*‘See how he is looking at you – he turns towards your voice. He knows it from before he was born.’*

To value the mother's opinions and life experience

*‘He must be the happiest baby in the world – sleeping full and content in mum's arms – what baby wouldn't want to do that?’*

Many mothers need encouragement to offer extra feeds. Need to be reassured that this is not going to cause problems, is in fact is rewarding.

Think of other words for greedy, lazy, angry-some negative or 'jokey' words that are used about babies

For example: Instead of *lazy* could say *just learning* or *just sleepy*.

## ***Building confidence***

Use the mother's values, expectations or experiences.

For example:–

- *‘You're doing a great job, look how your baby is growing and changing.’*
- *‘I can see how much you care you bring your baby in regularly for health checks.’*

By building a mother's self – esteem, you help to give her the confidence to trust herself and her mothering skills. This is very powerful for a mother and can help her to relax and enjoy mothering.

- Can you suggest other positive phrases?



Point out what she does well – '*look at the eye contact*'.

On the phone you can explain that your baby loves to look at your face and hear your familiar voice.

## ***Listening***

Listening includes observing body language (60% of communication is non-verbal)

Listening can be affected by many factors –

- physical,
- emotional,
- attitudes etc.

Active listening is listening with unconditional positive regard. It is listening with respect as the mother describes her situation and how she is feeling —'tuning in to her wavelength', listening to what she wants to say. It is imp

ortant that she feels you have heard and understood what she has said. Listening with interest often uses skills like minimal responses, giving responses to continue and non-verbal responses.

**Mothers feel that we are listening when we use personal things like her baby's name and age.**

Be patient – pauses are okay and can allow the mother to think about her story. Use small responses and encouragers

### **Listening involves use of small encouragers**

- Mmm ...
- Really ...
- OK ...
- I see ...
- And then ...?
- So ...
- Yes ...
- Uh-huh ...
- Go on ...

- **Minimal responses** —Minimal responses are part of our everyday language when involved in conversations. It is something you already know how to do, not a new skill you need to learn, but you may not have thought about it before. Minimal responses can be verbal and non-verbal depending on the situation.
- **Encouragers** —Sometimes a mum will hesitate and you know she has so much to say that she is not sure what to say next. It is important to give her time to think about where she wants to go. Occasionally she will be unsure about what to say next, or whether she has already said too much, and it can be helpful to give her a positive response to encourage her to continue talking.

### Questions

- Tell me more about ...?
- Then what happened?
- After that ...?
- Are there any things you have already tried?
- Do you think that any of these things helped?

**Open Questions**-open out the conversation and encourage the mother to tell her story

**Specific (closed) Questions**- may close the conversation. Require only a one word answer yes, no. Will be needed to hone in on some important information. Eg. Have you seen your medical advisor about this?

### ACTIVITY

Break into pairs.

- One person to be a listener and one person to be a talker.
- The talker is to talk for 2 minutes on anything they like.
- The listener is to provide no indicators that they are listening.

How did you feel as a talker?

- What did you do to try to get the listeners attention?

How did you feel as a listener?

- Could you concentrate?
- Can you remember much of what was said?



***Empathy is showing a mother that you understand.***





As peer supporters we are assisting mothers in making important decisions. To do this effectively we need to acknowledge that there is always an emotional dimension to the decision-making process. To mentor effectively we need to understand how a mother is feeling about her situation and the options available to her and to be able to communicate our understanding to the mother. Thus empathy is important throughout the mentoring process so that we can remain **with** the mother as she works through her situation.

The mothers you mentor will have many feelings about what is happening. Mothers with babies often feel that everyone is telling them what to do but not listening to how they feel.

As a mentor you can show a mother you are listening to how she feels. This is called empathy.

Empathy is not the same as sympathy. Empathy shows the mother that you understand her feelings by telling her what you think she is feeling. It shows the mother you can see things through her eyes.

The following table compares sympathy and empathy.

	Mother	Mentor	Mother
Sympathy	I have a problem 	You poor thing!	That doesn't really help 
Empathy	I have a problem 	You feel really worried about it	It feels good to be understood 

Empathy builds trust between you and the mother. It will help her to accept information you give her

### ACTIVITY: Empathy — How does this mother feel?

For each scenario, participants need to identify how the mother is feeling, and what might be a more appropriate response.

Participants to respond and allow time to write in the participant's handbooks – if they wish to.

These will be used for discussion in small groups.

- a. (Sevda) I've never been out without my baby. My friend wants me to go out and says I must bottle-feed when I go out. What can I do?
- b. (Francesca) I have to go back to work, so I have to give up breastfeeding.
- c. (Joyti) I've been trying for a couple of weeks to get my baby to take a bottle of formula but he just won't take it.
- d. (Toula) I've having a lot of trouble getting my baby to feed right and my nipples are sore and I'm so tired.

### **Encouraging and supporting mothers**

Becoming a mother and caring for a new baby can be very stressful. She may need someone to reassure and support her. Sometimes all she needs is to know that her baby is normal.

Normal babies vary a lot in what they do. Many (about 80%) 'problems' that mothers talk about are just normal baby behaviours. (see handout about normal breastfed babies needs)

Most mothers want the best for their babies and can be worried about what they are doing. Mothers also become confused because people give them lots of different advice. As a mentor you can listen and help them sort out what they want to do.

It is important to encourage mothers to look for further help for problems that are not normal baby behaviours or problems that do not improve quickly.

A good way to encourage and support mothers is by using words that help mothers feel they can succeed. This is called positive language.

Examples of positive and reassuring words to use are:

- You are doing a great job
- You are being a really good mum for your baby
- It sounds like you know what you are doing
- It sounds like you can really tell what your baby wants.

### **Checking that you understand what the mother needs**

A mother will tell you many things about how she feels and what is happening with her baby.

You need to make sure you understand what she says so you can help her work out what she needs to do. You can do this by telling her what you think she is saying. The mother can then tell you if you are right or not.

Often the mother will work out what she wants to do when you listen and talk to her.

Here are some ways to check if you have understood what the mother has told you:

- Before we go on, it will help me to check with you that I understand what has been happening. Would you mind if I do this?
- Just to go over some of what you said before we go on ...
- It sounds like this has been happening ...
- From what you said it seems that ...
- Am I right in thinking...?

### Giving mothers breastfeeding information and resources

An important part of being a peer support mentor is giving mothers and their family's up-to-date breastfeeding information and resources. Resources are available in the community such as at libraries, Maternal and Child Health Nurses, Australian Breastfeeding Association (ABA) local groups and ABA website, handouts from ante-natal classes, information received on the post natal ward.

#### When you give mothers information, it must be:

- up-to-date and correct
- easy for the mother to understand
- helpful and what the mother needs to know.

A supporter needs to know when to tell a mother to see someone else.

If a mother has a breastfeeding problem you will need to get her to talk to a breastfeeding counsellor or her child health nurse or doctor.

If she has a medical problem, you will need to get her to talk to a doctor or health worker.

If a mother asks about using drugs or alcohol while breastfeeding you can tell her that alcohol and most medicine or drugs will go into her milk. They may or may not affect the baby. It is important for her to talk to her medical adviser or pharmacist.

The Australian Breastfeeding Association has an article and leaflet on *Alcohol and Breastfeeding*. You can find it on the ABA website at: <https://www.breastfeeding.asn.au/bf-info/safe-when-breastfeeding/alcohol-and-breastfeeding>

### Promoting and encouraging breastfeeding in the community

Peer support mentors can support mothers to breastfeed by promoting breastfeeding in the community. This means telling people about breastfeeding and how important it is.

Most women start breastfeeding their babies but they do not always get support in their community. Often they stop breastfeeding before they need to.

Some of the reasons mothers stop breastfeeding are:

- thinking they don't have enough breast milk
- going back to work
- going out in public with baby
- using artificial baby milk (often called formula)
- getting lots of people telling them different things
- not knowing how to fix problems like sore nipples

There are lots of stories about breastfeeding. Some of them are true, but some are not true. A peer support mentor can help a mother to know what stories are true.

Here are some true things you can say to a mother:

- Artificial baby milk (formula) is not as good as breastmilk.
- Breastfeeding does not hurt.
- Breastfeeding does not take longer than bottle-feeding.
- A breastfed baby gets enough to drink even when it is hot.
- Breastmilk is not weak.
- Breastfeeding is good even if the mother smokes.

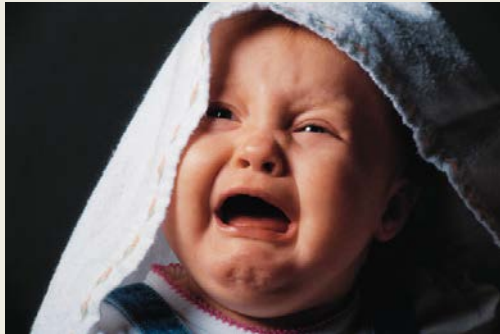
<https://www.breastfeeding.asn.au/bfinfo/breastfeeding-and-smoking>

Mothers need these things to keep breastfeeding:

- the right information
- confidence that they will make lots of breastmilk
- support from people who know about breastfeeding or know how important it is
- to know where to get help if they need it.

### ***Babies: What is normal?***

### Reasons babies cry

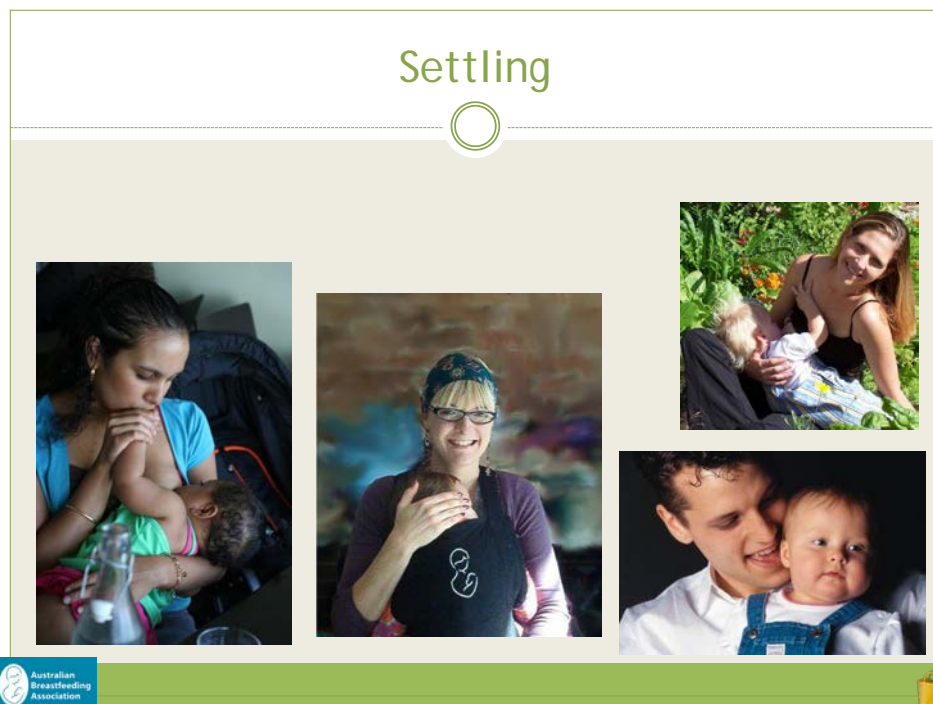


Bored	Pain
Hunger	Lonely
Fussy day	Tired
Too hot or cold	Sick

Australian Breastfeeding Association

- Babies vary in their feeding needs. They may need to feed as many as 10–15 times or as few as 6–8 times within 24 hours. Some feed quickly, some feed slowly. Some feed in spurts with rests in between and some seem to feed ‘all the time’!
- You cannot overfeed a baby with breastmilk. Babies are born with the instinct to know when they have had enough and this matches their bodies’ needs.
- Feeding patterns change. Let your baby lead you.

- Feeding according to need!
- Many women worry about how much milk their breastfed baby is getting. Low milk supply is the reason most often given by mothers who have given up breastfeeding. Yet it is very rare for mothers not to be able to produce enough milk. Only a very small number of mothers cannot breastfeed for physical reasons.
- There will be some periods of time when your baby seems more fussy and wants to breastfeed more often than usual. You may have heard these times referred to as 'growth spurts' or 'appetite increases'. You may now hear it called a 'wonder week'. It is now known that, after the newborn period, babies do not need increased amounts of milk as they grow bigger. Giving a bottle is not the solution at this time. This can in fact create a problem with your milk supply, because your baby will take less from the breast and this could reduce your milk supply. The best way is to follow your baby's lead and fit in some extra feeds for a couple of days and your baby should soon settle down again.
- Some mothers worry that their baby is not growing as they expect, or compared with other babies they know. All babies are different. Some babies grow at a constant rate, others grow in spurts. The weight and height charts used by your local child health nurse provide a guide to the overall trend of your baby's health. It is important not to become too concerned if there is not a weight gain in one week. Many other factors contribute to the rate of weight gain, including sickness, the clothes the baby is wearing, whether the scales are the same and your baby's previous growth. Breastfed babies can have different weight gain patterns from babies fed artificial baby milk. Remember that weight gain is only one of the things used to assess infant health (speak to your child health nurse if you have any further concerns).



- See *Normal nappies* info sheet in resources pack

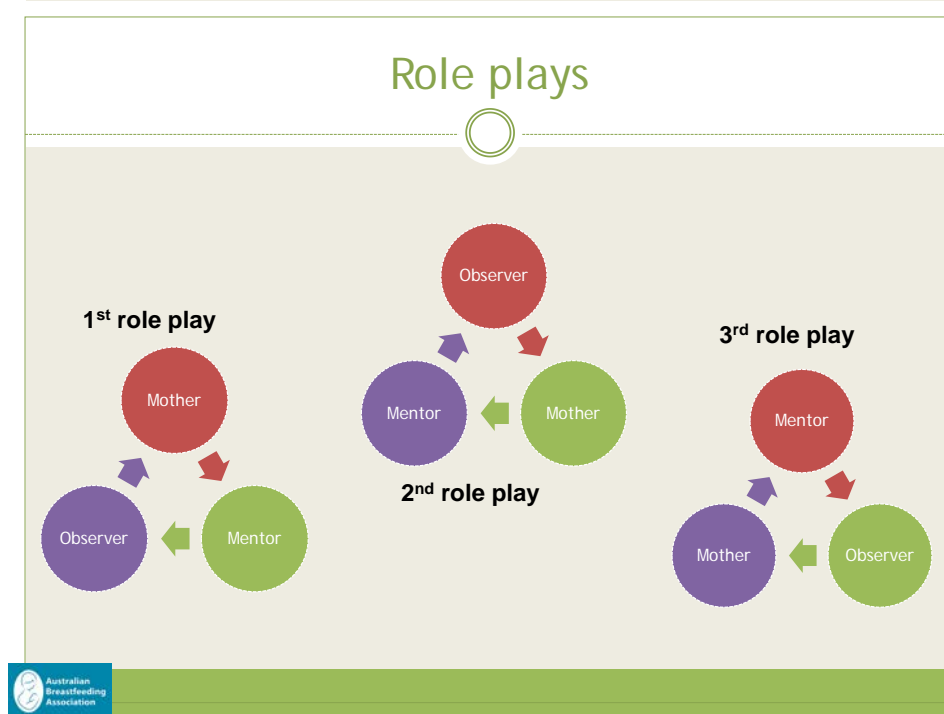
## ***Breastfeeding and work***

There is a range of options open to a working mother including:

- expressing at work
- feeding the baby expressed breastmilk
- having the child in care nearby or working from home
- giving bottle feeds when she cannot be
- present and breastfeeding the rest of the time

<https://www.breastfeeding.asn.au/bf-info/breastfeeding-and-work>

## ***Practising being a volunteer breastfeeding supporter***



You may like to practise being supporter. But it is good to practise listening and talking to mothers as much as you can.

We can practise mentoring by role plays. In role plays, people play a role, or act like another person. To practise mentoring, one person can play a mother and the other can play a mentor.

Role plays work best with three people:

- someone playing the mother
- someone playing the supporter
- an observer to check how the role play is going.

When you practise, it is a good idea to have a turn at all three roles. This way you will learn more about how the mother feels to be mentored and what you need to do as the mentor.

## **RUBY volunteer mothers' Information Manual**

Sometimes when people do role plays it reminds them of feelings they have had or they forget the other person is playing a role and feel hurt. It is important to talk about what happened in the role play afterwards. This is called debriefing.

To debrief the observer can ask the mother:

- How did you feel, talking to your mentor?
- What did you think of the way she talked to you?
- Did the mentor help you?

To debrief, the observer can ask the mentor:

- How did you feel, talking to the mother?
- Do you think you helped her?
- What could you change next time?

When doing a role play, you need to remember:

- You are playing a role — pretending to be the mother or the mentor.
- If you are the mother you don't make it hard for your mentor — you are practising, not trying to trick or test them.
- You can use names and ideas you know about if it helps you to pretend.
- You talk about how you feel after each role play — debrief.



## Role play check list with mother's feedback

<b>Learner playing the role of mentor - name</b>				
<b>Observer -name</b>				
<b>Person playing role of mother - name</b>				
<b>Date of role play</b>				
<b>Instructions for role play observation and feedback</b>				
<p><b>This is a role play triad. This means that after the role play the observer and the mother give information about how the mentor helped.</b></p> <p><b>Mother:</b> When the role play finishes, tell the mentor how helpful you found their mentoring as a mother</p> <p><b>Observer:</b> Check how the mentor uses the skills and knowledge on the list.</p>				
<b>Materials and equipment needed</b>				
<b>Mothers feedback</b> <i>(complete after the role play)</i>	<i>(tick appropriate box)</i>			
<b>During the role play, how helpful did you find it when the breastfeeding community mentor:</b>	<b>Very helpful</b>	<b>Helpful</b>	<b>Not helpful</b>	<b>No comment</b>
• Listened to what you said?				
• Encouraged and reassured you that you could work through your problems or breastfeeding questions?				
• Explained what was happening and gave you information on how to deal with your situation?				
• Offered you breastfeeding resources and services?				

## Role play check list

Observation of mentoring skills	Did the mentor use the skills? (tick appropriate box)			
During the role play, did the mentor...	No	A little bit	Yes	Not applicable
• Listen and hear what the mother said and felt?				
• Use positive language to encourage and reassure the mother that she can do this and she is doing a good job with mothering her baby?				
• Give the mother information that was helpful to the mother's questions or situation?				
• Explain what was happening to the mother so that the mother could understand?				
• Tell the mother about breastfeeding resources and services she could use?				
Essential knowledge to be demonstrated by the mentor	Did the mentor provide breastfeeding knowledge?			
During the role play, did the mentor...	No	A little bit	Yes	Not applicable
• Tell the mother why breastfeeding was important?				
• Explain the concept of feeding to need rather than a schedule?				
• Explain the signs a mother can look for to find out if her baby is getting enough milk? <ul style="list-style-type: none"> <li>○ Wet and dirty nappies</li> <li>○ Weight gains over time</li> <li>○ Contented times and/or appearance</li> </ul>				

### Time to review

- As a volunteer mother, you will provide empathy, encouragement and social support to new breastfeeding mothers by telephone. You are not expected to provide a solution to all her problems.
- However your own breastfeeding experience may enable you to support the woman's decisions, and to suggest alternative strategies or direct her to other resources

### References

- Australian Breastfeeding Association *Community Breastfeeding Mentor Handbook*.
- Australian Breastfeeding Association – *Breastfeeding: An Introduction* booklet.
- Lactation Resource Centre – Australian Breastfeeding Association.

## Appendix 1— Resources

- Volunteer Information Manual, including Support Services list
- ABA membership leaflet
- Breastfeeding Helpline magnet
- *Caregiver's guide to the breastfed baby*\*  
<https://www.breastfeeding.asn.au/bfinfo/caregivers.html>
- *Breastfeeding confidence* e- booklet view at [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au)
- *Alcohol and breastfeeding: a guide for mothers* leaflet \*  
<https://www.breastfeeding.asn.au/bf-info/safe-when-breastfeeding/alcohol-and-breastfeeding> (or search for *alcohol* at [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au))
- *Is your baby sleeping safely?* leaflet \* <https://www.breastfeeding.asn.au/bf-info/sleep/your-baby-sleeping-safely> (or search for *sleeping safely* at [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au))
- Australian Breastfeeding Association booklet titles\*
- Normal nappies info sheet\*
- Feeding Cues info sheet (available from <https://www.breastfeeding.asn.au/shop/groupprojects>)
- [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au) – information pages
- [www.breastfeedingfriendly.com.au](http://www.breastfeedingfriendly.com.au)

\*also available from Mothers Direct [www.mothersdirect.com.au](http://www.mothersdirect.com.au)

## Appendix 2 — Other support services

Provided for reference only – listing does not mean endorsement

### NATIONAL

- 1800 686 268 (1800 mum 2 mum) Australian Breastfeeding Association 24 Breastfeeding Helpline
- 1800 Respect (counselling/referral for those that have experienced or at risk of physical or sexual abuse) 1800 737 732
- Allergy & Environmental Support & Research Association [www.aessra.org](http://www.aessra.org)
- Anaphylaxis Australia [www.allergyfacts.org.au](http://www.allergyfacts.org.au) 1300 728 000
- Australian Breastfeeding Association [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au)
- Australian College of Lactation Consultants [www.lactation.org.au](http://www.lactation.org.au)
- Beyond Blue [www.beyondblue.org.au](http://www.beyondblue.org.au) 1300 224 636
- Continence helpline 1800 33 00 66
- Cystic Fibrosis in Australia [www.cysticfibrosis.org.au](http://www.cysticfibrosis.org.au) 1800 232 823
- Deaf Child Australia Helpline 1800 645 916
- Diabetes Australia [www.diabetesaustralia.com.au](http://www.diabetesaustralia.com.au) 1300 136 588
- Dietitians Association of Australia [www.daa.asn.au](http://www.daa.asn.au) 1800 812 942
- Domestic Violence & Sexual Assault Helpline 1800 200 526
- Epilepsy Australia [www.epilepsyaustralia.org](http://www.epilepsyaustralia.org) 1300 852 853
- GP after hours helpline 1800 022 222
- Heartkids [www.heartkids.org.au](http://www.heartkids.org.au)
- Kids Help Line 1800 551 800
- Lactation Consultants Australia and New Zealand (LCANZ) [www.lcanz.org](http://www.lcanz.org)
- Lifeline - Crisis Counselling (24-Hour) [www.lifeline.org.au](http://www.lifeline.org.au) 13 11 14
- Limbkids Support Association-care for kids with limb differences [www.limbkids.asn.au](http://www.limbkids.asn.au) (07) 5533 9754
- Mensline Australia 1300 789 978
- National Asthma Council [www.nationalasthma.org.au](http://www.nationalasthma.org.au) (03) 8699 0476
- PaNDa (Post / Ante Natal Depression Support) [www.panda.org.au](http://www.panda.org.au) 1300 726 306
- Parentline 132 289
- Playgroup Australia [www.playgrouppaustralia.com.au](http://www.playgrouppaustralia.com.au) 1800 171 882
- Pregnancy Help Line Aust-wide (options and alternatives) 1300 139 313
- Reflux Infants Support Association. (RISA) [www.reflux.org.au](http://www.reflux.org.au) (07) 3229 1090
- Relationships Australia [www.relationships.com.au](http://www.relationships.com.au) 1300 364 277
- SANDS (Stillbirth and Neonatal Death Support) [www.sands.org.au](http://www.sands.org.au)
- SANE Helpline (mental illness info, support and referral) 1800 18 7263
- Sexual Assault, Family & Domestic Violence Counselling Line 1800 737 732
- SIDS and Kids [www.sidsandkids.org](http://www.sidsandkids.org) 1300 308 307
- TTY (telephone typewriter) Service 13 36 77
- Vibe Australia – to find details for local Aboriginal Medical Services [www.vibe.com.au](http://www.vibe.com.au)
- WIRE (Women's Information & Referral Exchange) [www.wire.org.au](http://www.wire.org.au) 1300 134 130

**VICTORIA**

- Allergy and Environmental Support & Research Association 9888 1382
- Asthma Foundation of Vic. [www.asthma.org.au](http://www.asthma.org.au) 9326 7088 Freecall 1800 645 130
- Australian Breastfeeding Association - The Breastfeeding Centre (Dandenong) [www.abavic.asn.au](http://www.abavic.asn.au) 03 9791 4644 (Tue – Thu) Drop in day Wednesday 10.30 –3.30
- Breast Clinic Monash Medical Centre (need appointment, no referral) 9550 1111
- College of Lactation Consultants Victoria [www.lactation.org.au](http://www.lactation.org.au)
- Compassionate Friends Bereaved Parent Centre [www.compassionatefriendsvictoria.org.au](http://www.compassionatefriendsvictoria.org.au) 9888 4944
- Distressed Infant Support Association – high needs babies (colic, reflux) 9513 9640
- Drug Information - Royal Women's Hospital 9344 2277
- Epilepsy Foundation of Victoria [www.epinet.org.au](http://www.epinet.org.au) 9805 9111
- Family Planning Vic (Pregnancy Counselling) [www.fpv.org.au](http://www.fpv.org.au) 9257 0100
- Griefline [www.bethlehem.org.au/griefline.shtml](http://www.bethlehem.org.au/griefline.shtml) 9596 7799
- Maternal and Child Health 13 22 29
- Monash Medical Centre 03 9594 2361
- Nurse on Call 24/7 1300 60 60 24
- O'Connell Family Centre (Canterbury) 03 8416 7600
- Parentline [www.parentline.vic.gov.au](http://www.parentline.vic.gov.au) 13 22 89
- Parents Victoria [www.parentsvictoria.asn.au](http://www.parentsvictoria.asn.au) 9417 4140 Freecall 1800 032 023
- Queen Elizabeth Centre (Noble Park) – parenting centre [www.qec.org.au](http://www.qec.org.au) 9549 2777
- Relationships Australia (Relationship counselling and mediation) [www.relationships.com.au](http://www.relationships.com.au) 9261 8700
- Royal Children's Hospital (03) 9345 5522
- Royal District Nursing Services (Head Office) [www.rdns.com.au](http://www.rdns.com.au) 9536 5222
- Tweddle Child and Family Health Service [www.tweddle.org.au](http://www.tweddle.org.au) 9689 1577

**The Women's Hospital**

- Breastfeeding Support Service 8345 2400 (for women who birthed at the Women's)
- Consumer Representative 8345 2290/ 8345 2291
- Women's Health Information Centre 8345 3045 or 1800 442 007

**Services in the Eastern suburbs**

- Dandenong Hospital lactation day stay 9554 8118 (only a couple of days a week, need to call and book), it's free.

**Other hospital lactation support services**

- Birralee Maternity Services Lactation Support Unit, Box Hill South Community Health Centre, Riversdale Rd, Box Hill South 9895 4656 – free to all public hospital clients
- Casey Hospital 8768 1200 – need to be a Casey patient
- City of Casey Breastfeeding Clinic 9705 5590 – every Wednesday, free, need to book
- City of Greater Dandenong Breastfeeding Clinic 9548 1349 – Thursday 9.30am-12pm (LC Elaine), free
- Mercy Hospital 8458 4677
- Mitcham Private Hospital 9210 3111 – need health insurance
- Sandringham Hospital 9076 1570 –\$70 if birthed elsewhere

- Yarra Valley Community Health Breastfeeding Service Healesville 5969 9937

#### **MEDICINE/DRUG INFORMATION**

**Medicines Information Centres at hospitals are staffed by pharmacists** and can answer queries on prescription and over the counter medications (eg pain relievers and cold medication), complementary medicines (vitamins, minerals, herbal, natural medicines), legal (eg caffeine, alcohol, nicotine) and illegal drugs (eg. cannabis, heroin, ecstasy) and environmental exposure. Most centres operate during normal business hours - if a call is urgent and outside these hours then refer the caller to the Poisons Information Centre 13 11 26 (all states & territories).

- Monash Medical Centre 9594 2361
- Royal Women's Hospital 8345 3190
- **Poisons Information is available 24 hours a day 7 days a week on 13 11 26** (all states & territories)



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**Volunteer and project coordinator contacts:**

**Heather Grimes – RUBY volunteer coordinator Phone: 0429 048 530**

**Fiona McLardie-Hore – RUBY project coordinator Phone: 03 8345 2932**

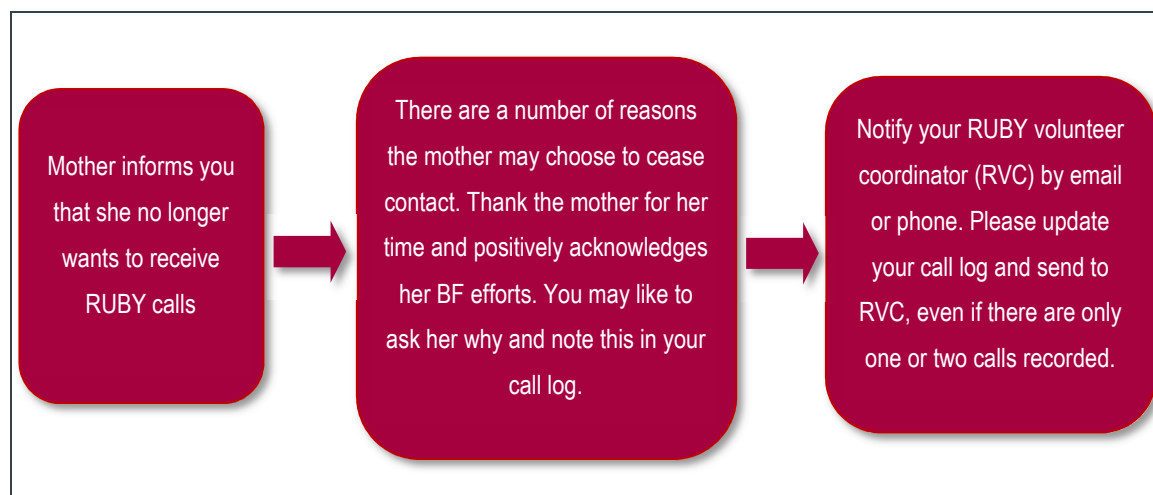
**Email: [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)**

## Appendix L Steps for handling difficult situations

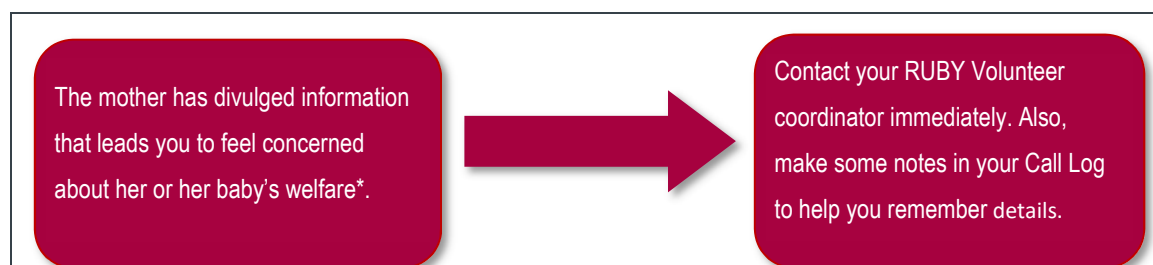
### Suggested responses to situations that may arise during your period of support.

During your period of support, you may encounter some of the following situations. These flow charts may be used as a guide to how you deal with these situations. They are intended as a guide only and we encourage you to contact your RUBY Volunteer coordinator for further advice.

*Table 1: The mother informs you that she doesn't want to receive any more calls*



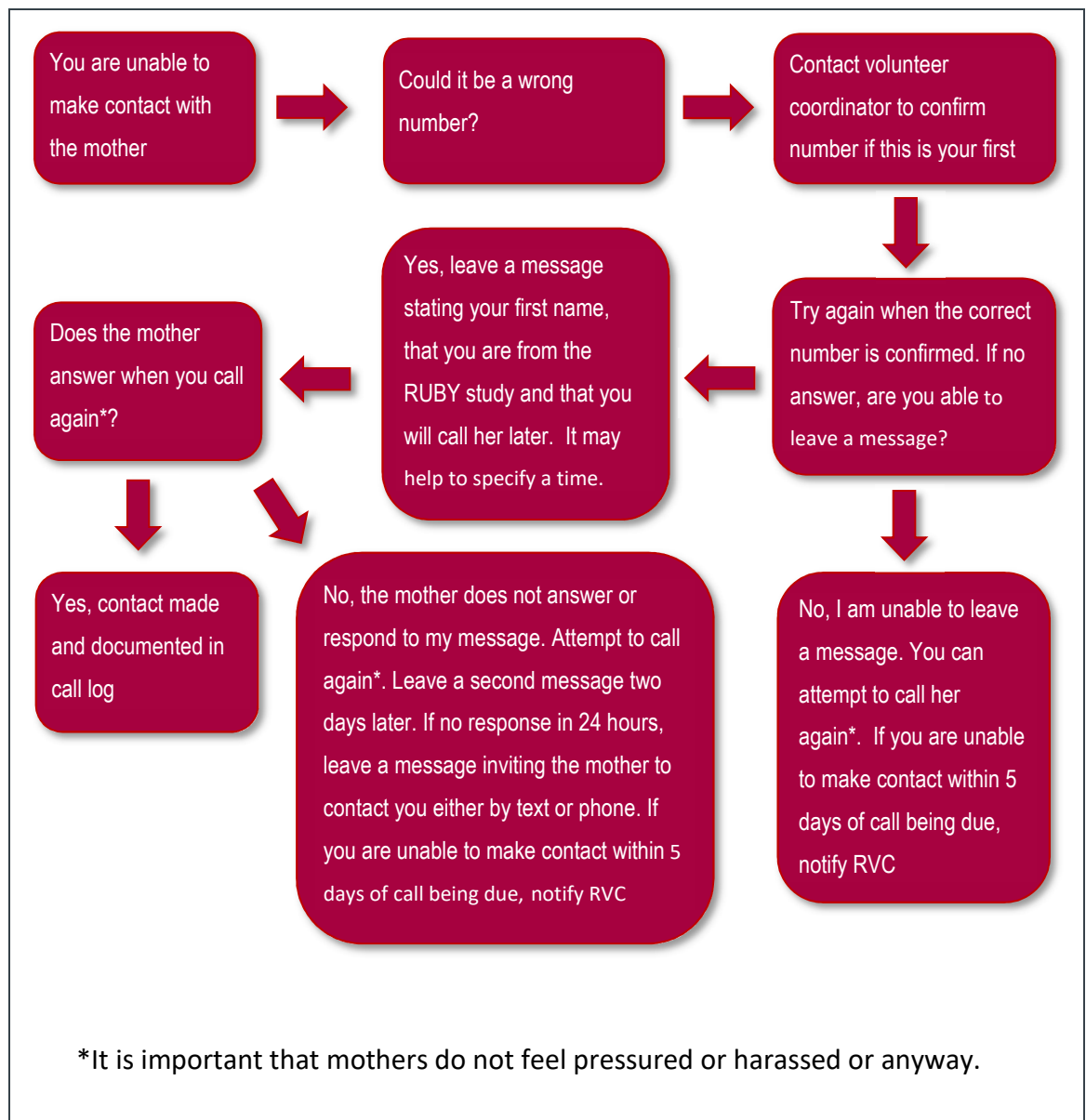
*Table 2: You are concerned for the welfare of a mother and/or baby*



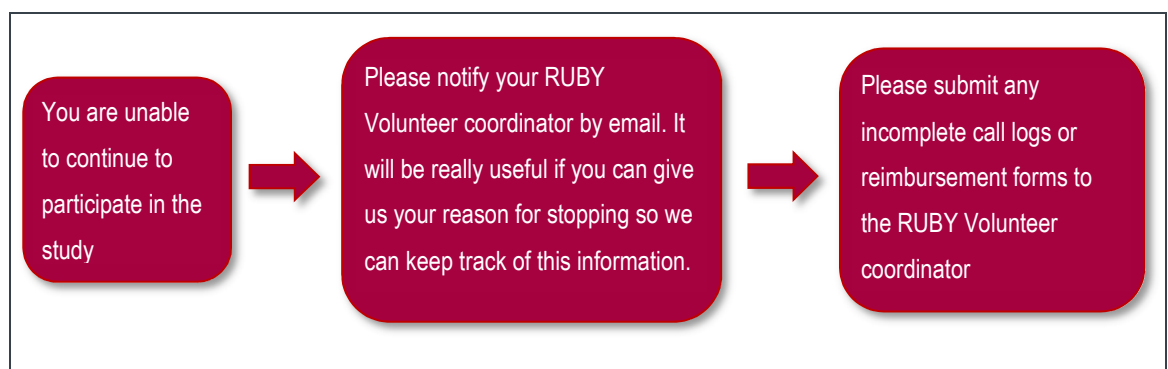
\*We anticipate that this will be a very infrequent occurrence; however, we will take seriously any concerns you have and respond accordingly.



*Table: 3 You are unable to contact the mother*



*Table 4: You are unable to continue as a volunteer*



## Appendix M RUBY volunteer enrolment form



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<b>Your name:</b>	
<b>Your postal address:</b>	
<b>Your contact numbers:</b>	<b>Preferred:</b>  <b>Other:</b>  
<b>Email:</b>	
<b>What is your date of birth:</b> <div style="text-align: center;">             __ / __ / __              day/month/year           </div>	
<b>In which country were you born?</b>	<b>If you were born overseas, which year did you arrive in Australia?</b>
<b>What is your occupation or usual type of work?</b>	
<b>How many children do you have?</b>	
<b>What are the ages of your children?</b>	<div>1.</div> <div>2.</div>
	<div>3.</div> <div>4.</div>
	<div>5.</div> <div>6.</div>
<b>How many children have you breastfed?</b>	
<b>What is the longest duration of breastfeeding for an individual child?</b>	
<b>Are you a current member of ABA?</b>	
<b>Can you please describe why you are interested in being a volunteer for the RUBY project?</b>	

<b>Where did you hear about the RUBY project?</b>		
<b>Do you think you could spend approximately 30 minutes per week providing telephone breastfeeding support to a new mother?</b>	<b>Yes</b>	<input type="checkbox"/>
	<b>No</b>	<input type="checkbox"/>
<b>Do you think you would be able to commit to providing this support for at least 12 weeks?</b>	<b>Yes</b>	<input type="checkbox"/>
	<b>No</b>	<input type="checkbox"/>
<b>Do you agree to keep a written log of the calls you make to the new mother?</b>	<b>Yes</b>	<input type="checkbox"/>
	<b>No</b>	<input type="checkbox"/>
<b>Have you ever completed any formal breastfeeding education? E.g. ABA counsellor training? Please provide a brief description or name of course.</b>	<b>Yes</b>	<input type="checkbox"/>
	<b>No</b>	<input type="checkbox"/>
<b>When would you be available to start providing support to new mothers?</b>	<b>As soon as possible</b>	<input type="checkbox"/>
	<b>At a later time</b> <i>Please indicate when you would like to be contacted.....</i>	<input type="checkbox"/>
	<b>Thank you, but I will not volunteer just now</b>	<input type="checkbox"/>
<p><b>Privacy &amp; Confidentiality agreement</b></p> <p>During your time with the RUBY project, you will come into contact with information that must be kept confidential at all times.</p> <p>Confidentiality is the preservation of personal information concerning a person and their family which is disclosed in the course of providing support for the RUBY project.</p> <p>It is each RUBY volunteer's responsibility to ensure that they do not discuss such information with others who are not directly involved with RUBY.</p> <p>Any breach in confidentiality would discontinue your involvement with RUBY.</p> <p>I, ..... (insert name), have read the above and agree to maintain the RUBY project policy on privacy and confidentiality.</p>		
<b>Signature:</b>		<b>Date:</b>
<i>Office use only</i>		
Training venue:	Date:	Database: Y/N

## Appendix N RUBY Call Log

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## RUBY volunteer mothers' Call Log

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### How to use this call log:

Please use a call log to record *all* telephone contacts between you and *each* mother you provide breastfeeding support to. This includes times when you have attempted to call, but there has been no answer, or if you left a message. There is a *separate* table to record the unanswered calls or times when a message was left.

The information you provide is very important to the research aspects of the Ruby study. If any information you provide is used, for example in reports, it will be completely de-identified.

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#### Summary of contact schedule

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Initial contact	• Volunteer rings the new mother with 4-6 days of birth
Second contact	• Volunteer rings new mother within 3-4 days after the initial call
Subsequent calls	• Weekly for first 12 weeks after birth unless mother prefers less contact • Three to four weekly from 12 weeks to six months after birth

### Submission of the call log:

You will send your call log to the RUBY volunteer mother coordinator, or submit electronically if using an online or emailed version, when your period of support for an individual woman finishes. When your call log is received, your reimbursement for calls (\$50) will be deposited into your nominated bank account.

Any questions related to the call logs may be directed to Heather Grimes or Fiona McLardieHore.

#### Volunteer and project coordinator contacts:

**Heather Grimes – RUBY volunteer coordinator; phone:**

**Fiona McLardie-Hore – RUBY project coordinator; phone: 03 8345 2932**

**Email: [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)**



**Please record all *unanswered* calls, and times when messages are left here...**

**(Each answered call will be recorded on a separate call-log sheet)**

[illegible]



**Please record all *text messages* here...**

<b>Number</b>	<b>Date</b>	<b>Who initiated the text?</b>	<b>In a few words, please describe main purpose of text. For example it may be to arrange a call time or to share brief information. If multiple messages are exchanged in a short time period, record as one message</b>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
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14			
15			
16			
17			
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21			
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26			
27			
28			

**Please record all *text messages* here...**

<b>Number</b>	<b>Date</b>	<b>Who initiated the text?</b>	<b>In a few words, please describe main purpose of text. For example it may be to arrange a call time or to share brief information. If multiple messages are exchanged in a short time period, record as one message</b>
29			
30			
31			
32			
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56			

<b>1. Call number:</b> (e.g. 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> etc. Please use a separate sheet for each conversation)	<b>2.Date:</b>	<b>3.Time of call</b> (e.g. 3:15pm)	4. You rang mother <input type="checkbox"/>  Mother rang you <input type="checkbox"/>																		
<b>5. Length of call:</b>		_____ minutes																			
<b>6. Did you think the woman valued /appreciated the call today? (If using electronic format, please 'bold' statements)</b>			Yes <input type="checkbox"/> No <input type="checkbox"/>																		
<b>7. If yes, what aspect of the call do you think she valued? (If using electronic format, please 'bold' statements)</b>																					
<input type="checkbox"/> General emotional support <input type="checkbox"/> Someone to talk to but not necessarily about breastfeeding <input type="checkbox"/> General information/discussion you provided about breastfeeding <input type="checkbox"/> You answered specific breastfeeding related questions/ concerns raised by the woman <input type="checkbox"/> Unsure <input type="checkbox"/> Other _____																					
<b>8. Did the woman raise any specific concerns? (If using electronic format, please 'bold' statements)</b>			Yes <input type="checkbox"/> No <input type="checkbox"/> (please go to question 10)																		
<b>9. What were the main concerns raised by the woman? (tick all that apply or if using electronic format, please 'bold' statements)</b>																					
<table border="0"> <tr> <td><input type="checkbox"/> General breastfeeding information</td> <td><input type="checkbox"/> Engorgement</td> </tr> <tr> <td><input type="checkbox"/> General concern/ anxiety</td> <td><input type="checkbox"/> Mastitis</td> </tr> <tr> <td><input type="checkbox"/> Supply and demand</td> <td><input type="checkbox"/> Nipple/ breast thrush</td> </tr> <tr> <td><input type="checkbox"/> Feed frequency</td> <td><input type="checkbox"/> Expressing</td> </tr> <tr> <td><input type="checkbox"/> Positioning and attachment</td> <td><input type="checkbox"/> Nipple shield</td> </tr> <tr> <td><input type="checkbox"/> Normal infant behaviour</td> <td><input type="checkbox"/> Tongue- tie</td> </tr> <tr> <td><input type="checkbox"/> Nipple pain/ damage</td> <td><input type="checkbox"/> Baby unwell</td> </tr> <tr> <td><input type="checkbox"/> Not enough milk</td> <td><input type="checkbox"/> Mother's health problem</td> </tr> <tr> <td><input type="checkbox"/> Oversupply</td> <td><input type="checkbox"/> Other(s) _____</td> </tr> </table>				<input type="checkbox"/> General breastfeeding information	<input type="checkbox"/> Engorgement	<input type="checkbox"/> General concern/ anxiety	<input type="checkbox"/> Mastitis	<input type="checkbox"/> Supply and demand	<input type="checkbox"/> Nipple/ breast thrush	<input type="checkbox"/> Feed frequency	<input type="checkbox"/> Expressing	<input type="checkbox"/> Positioning and attachment	<input type="checkbox"/> Nipple shield	<input type="checkbox"/> Normal infant behaviour	<input type="checkbox"/> Tongue- tie	<input type="checkbox"/> Nipple pain/ damage	<input type="checkbox"/> Baby unwell	<input type="checkbox"/> Not enough milk	<input type="checkbox"/> Mother's health problem	<input type="checkbox"/> Oversupply	<input type="checkbox"/> Other(s) _____
<input type="checkbox"/> General breastfeeding information	<input type="checkbox"/> Engorgement																				
<input type="checkbox"/> General concern/ anxiety	<input type="checkbox"/> Mastitis																				
<input type="checkbox"/> Supply and demand	<input type="checkbox"/> Nipple/ breast thrush																				
<input type="checkbox"/> Feed frequency	<input type="checkbox"/> Expressing																				
<input type="checkbox"/> Positioning and attachment	<input type="checkbox"/> Nipple shield																				
<input type="checkbox"/> Normal infant behaviour	<input type="checkbox"/> Tongue- tie																				
<input type="checkbox"/> Nipple pain/ damage	<input type="checkbox"/> Baby unwell																				
<input type="checkbox"/> Not enough milk	<input type="checkbox"/> Mother's health problem																				
<input type="checkbox"/> Oversupply	<input type="checkbox"/> Other(s) _____																				

**10. Other topics may have been discussed that were not raised by the woman, please tick all that apply (or if using electronic format, please 'bold' statements)**

- |                                                            |                                                  |
|------------------------------------------------------------|--------------------------------------------------|
| <input type="checkbox"/> General breastfeeding information | <input type="checkbox"/> Engorgement             |
| <input type="checkbox"/> General concern/ anxiety          | <input type="checkbox"/> Mastitis                |
| <input type="checkbox"/> Supply and demand                 | <input type="checkbox"/> Nipple/ breast thrush   |
| <input type="checkbox"/> Feed frequency                    | <input type="checkbox"/> Expressing              |
| <input type="checkbox"/> Positioning and attachment        | <input type="checkbox"/> Nipple shield           |
| <input type="checkbox"/> Normal infant behaviour           | <input type="checkbox"/> Tongue- tie             |
| <input type="checkbox"/> Nipple pain/ damage               | <input type="checkbox"/> Baby unwell             |
| <input type="checkbox"/> Not enough milk                   | <input type="checkbox"/> Mother's health problem |
| <input type="checkbox"/> Oversupply                        | <input type="checkbox"/> Other(s) _____          |

**11. Did you refer the mother to any health services? (tick all that apply or if using electronic format, please 'bold' statements)**

- ☐ No referrals made
- ☐ GP
- ☐ Private lactation consultant
- ☐ ABA
- ☐ Hospital service e.g. emergency department
- ☐ Hospital lactation service
- ☐ Maternal and Child health
- ☐ Other resource e.g. website(please name)

**12. Follow – up and general comments**

### Conclusion of period of support

*Please complete this section at the conclusion of your period of support for this mother*

**When did you last have verbal contact with this mother?**

Date \_\_\_\_\_

**What was the main reason this period of support ceased?**

The period of support ended as per the study protocol (6 months)

☐

The mother discontinued breastfeeding

☐

The mother requested no more calls

☐

I was unable to contact the mother

☐

I am no longer able to provide support

☐

Other reason *(please provide details)*

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Thank you for providing support to this new mother and for participating in the RUBY study. Please post/email this Call Log to the RUBY volunteer coordinator:

Heather Grimes  
La Trobe Rural Health School  
PO Box 199,  
Bendigo,  
Victoria, 3552

Email: [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)

Phone:

Would you like to support another breastfeeding woman in the RUBY study?

☐ Yes, I would like to support another woman as soon as possible

☐ No, not at this time, but please contact me after.....(approximate date)

☐ No, I am unable to provide further support.

Your feedback is extremely valuable and we would appreciate any comments you may have regarding the RUBY trial:

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## Appendix O RUBY Volunteer Experiences Survey

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Today's date \_\_/\_\_/\_\_



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## **The RUBY study**

# **A survey about your experiences as a volunteer**

### **Thank you again for being a part of the RUBY study**

We are interested in your views and experiences of being a volunteer no matter what they are – there are no right or wrong answers

The survey will take you about 10 to 15 minutes to complete. If there are any questions you would prefer to not answer that is fine – please just move on to the next question.



Section one: Your experiences of making RUBY calls			
Q1	Can you recall how many mothers <b><i>were allocated to you</i></b> during your time as a RUBY volunteer, including those you were unable to contact?		<input type="checkbox"/> <input type="checkbox"/>
Q1_nu mmot	<input type="checkbox"/> <input type="checkbox"/>	Mother(s)	
Q1_ca ntrecal l	<input type="checkbox"/>	Can't recall	
2	In total, how many mothers <b><i>did you provide any telephone support to</i></b> during your time as a RUBY volunteer, excluding those you were <b><i>never</i></b> able to contact?		<input type="checkbox"/> <input type="checkbox"/>
		I can't recall	
	<input type="checkbox"/> <input type="checkbox"/>	Mother(s)	
	<input type="checkbox"/>	I did not provide support to any mothers (please skip to question 13)	
Q3_cal lsched ule	In general, the RUBY call schedule required weekly calls for the first 12 weeks and then 3-4 weekly calls until the period of support is completed at six months. How closely were you able to follow this schedule?		<input type="checkbox"/>
	<input type="checkbox"/> _1	I followed the call schedule most of the time	
	<input type="checkbox"/> _2	I followed the call schedule some of the time	
	<input type="checkbox"/> _3	I rarely followed this schedule	
	<input type="checkbox"/> _4	I was unable to follow the schedule	
4	Can you please describe some of the reasons that influenced whether or not you could follow the call schedule?		
	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>		
5	Overall, how did you feel about the frequency of the calls?		<input type="checkbox"/>
	<input type="checkbox"/> _1	About right	
	<input type="checkbox"/> _2	Too long	
	<input type="checkbox"/> _3	Too short	

<b>6</b>	<b>The RUBY protocol states that contact with mothers should continue for up to 6 months. Can you tell us how many mothers you were able to maintain contact with for the full 6 months? (please write number in the text box)</b>		
		I was unable to support any mothers for six months	
		I can't recall	
	<input type="text"/> <input type="text"/>	Mother(s)	
<b>7</b>	<b>Can you estimate the shortest length of time you supported a mother? (please write number of days OR weeks, if applicable in box provided)</b>		
		Day(s)	
		OR Week(s)	
		OR Other (please describe)	
<b>8</b>	<b>If you supported a woman for less than six months, can you tell us some of the reasons for this?</b> (please, tick all that apply)		<input type="checkbox"/>
	<input type="checkbox"/> 1	Not applicable as I supported all mothers for 6 months	
	<input type="checkbox"/> 2	The mother requested no more calls	
	<input type="checkbox"/> 3	I was unable to contact the mother	
	<input type="checkbox"/> 4	I was not able to continue to provide support	
		Other. Please describe: _____ _____ _____	
<b>9</b>	<b>Overall, how did you feel about the length of time you were asked to support a mother in the RUBY study (i.e. six months)?</b>		<input type="checkbox"/>
	<input type="checkbox"/> 1	About right	
	<input type="checkbox"/> 2	Too often	
	<input type="checkbox"/> 3	Not frequent enough	
	<input type="checkbox"/> 4	Other, please comment _____ _____ _____	

10	Can you please comment on the positives of your role as a RUBY volunteer?	
	<hr/> <hr/> <hr/>	
11	Can you please comment on any challenges about your role as a RUBY volunteer?	
	<hr/> <hr/>	
12	What was the main reason that you stopped volunteering in the RUBY study? (please tick all that apply)	<input type="checkbox"/>
	<input type="checkbox"/> <sub>1</sub> The RUBY study finished	
	<input type="checkbox"/> <sub>2</sub> I wanted to started ABA counsellor training	
	<input type="checkbox"/> <sub>3</sub> My family commitments changed	
	<input type="checkbox"/> <sub>4</sub> I returned to work	
	<input type="checkbox"/> <sub>5</sub> I felt dissatisfied with my experience as a volunteer	
	<input type="checkbox"/> <sub>6</sub> Other, please describe:	

Section two: Your experiences as a volunteer (skip from Q2 to this question if never provided support to any mother)

13	We are interested in your views and experiences of being a volunteer. These questions are used to assess the impact volunteering has on you. Using the 7 – point scale below please indicate the amount of agreement or disagreement you personally feel with each statement							
		Strongly disagree						Strongly agree
13.1	In volunteering for the RUBY study, I made new contacts that might help my career	1	2	3	4	5	6	7
13.2.	My friends and family know that I am volunteering for the RUBY study	1	2	3	4	5	6	7
13.3	People I am genuinely concerned about are being helped by me volunteering for RUBY	1	2	3	4	5	6	7
13.4	Volunteering with RUBY has helped me escape some of my own troubles	1	2	3	4	5	6	7

13.5	I have learned how to deal with a greater variety of people through volunteering for the RUBY study	1	2	3	4	5	6	7	
13.6	As a volunteer for RUBY, I have been able to explore possible career options	1	2	3	4	5	6	7	
13.7	People I'm close to value the fact that I am volunteering	1	2	3	4	5	6	7	
13.8	Through volunteering for RUBY, I am doing something for a cause that I believe in	1	2	3	4	5	6	7	
13.9	I felt needed while volunteering	1	2	3	4	5	6	7	
13.10	By volunteering for RUBY, I have been able to work through some of my own personal problems	1	2	3	4	5	6	7	
13.11	I have been able to learn more about the importance of breastfeeding support by volunteering with RUBY	1	2	3	4	5	6	7	
13.12	I am enjoying my volunteer experience	1	2	3	4	5	6	7	
13.13	My volunteer experience has been personally fulfilling	1	2	3	4	5	6	7	
13.14	The experience of volunteering with RUBY has been a worthwhile one	1	2	3	4	5	6	7	
13.15	I have been able to make an important contribution by volunteering with RUBY	1	2	3	4	5	6	7	
13.16	I have accomplished a great deal of 'good' by volunteering with the RUBY study	1	2	3	4	5	6	7	
13.17	One year from now I will be volunteering for an organisation	1	2	3	4	5	6	7	
13.18	I would volunteer to provide telephone support if a program like RUBY was offered in the future	1	2	3	4	5	6	7	
13.19	I would recommend the type of telephone support provided in the RUBY study to new mothers	1	2	3	4	5	6	7	
14	One year from now, will you be (please circle your best guess as of today):	<input type="checkbox"/> 1	Volunteering with RUBY						<input type="checkbox"/>
		<input type="checkbox"/> 2	Volunteering at another organisation						<input type="checkbox"/>
		<input type="checkbox"/> 3	Not volunteering at all						<input type="checkbox"/>
		<input type="checkbox"/> 4	I don't know						<input type="checkbox"/>
15	Would you like to make any comments about your answer to question 14? <hr/> <hr/> <hr/> <hr/> <hr/>								

### Section three: The support you received as a volunteer

**16**      **The following statements relate to aspects of the support you received as a RUBY volunteer. We would like to know if you agree or disagree with these views.**

		Disagree strongly	Disagree	Neither agree or disagree	Agree	Agree strongly
16.1	The RUBY team were approachable	1	2	3	4	5
16.2	I could contact the RUBY volunteer coordinator as often as I needed	1	2	3	4	5
16.3	My concerns were taken seriously by the RUBY team	1	2	3	4	5
16.4	I was able to provide feedback about the program	1	2	3	4	5
16.5	I felt valued by the RUBY research team	1	2	3	4	5
16.6	I felt positive about being a part of RUBY	1	2	3	4	5
16.7	I found the call log easy to use	1	2	3	4	5
16.8	I found the training manual a useful resource	1	2	3	4	5
16.9	The training session prepared me well for the role	1	2	3	4	5
16.10	I felt supported by the RUBY team during my time as a volunteer	1	2	3	4	5
16.11	I would have liked ongoing training sessions during my time as a RUBY volunteer	1	2	3	4	5
17	<b>Overall, how satisfied were you with your role as a volunteer in the RUBY study?</b> <i>Please check the response that best describes your overall level of satisfaction</i>					
	Very dissatisfied	Dissatisfied	Neither satisfied or dissatisfied	Satisfied	Very satisfied	
18	<b>Would you like to make any further comments about your overall level of satisfaction with your experience as a RUBY volunteer?</b>					
19	<b>Please read the following statements and indicate the extent to which you agree or disagree</b>					<input type="checkbox"/>
		Strongly Disagree	Disagree	Neither agree or disagree	Agree	Agree strongly
19.1	I think the RUBY telephone support program will be effective in helping women to breastfeed	1	2	3	4	5

<b>19.2</b>	Telephone support for breastfeeding was valued by women	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>19.3</b>	I would volunteer for a program like RUBY in the future	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>20</b>	<b>Did you attend any of the RUBY social get-togethers'?</b>					
	Yes					
	No					
	I can't recall					
	I didn't know about them					
<b>21</b>	<b>Do you have any comments about the RUBY social 'get-togethers'?</b>					
	<hr/> <hr/> <hr/> <hr/> <hr/>					
<b>Section four: Questions about you</b>						
<b>22</b>	How old are you? _____ years					<input type="text"/> <input type="text"/>
<b>23</b>	<b>Are you</b> .....					<input type="checkbox"/>
	<input type="checkbox"/> 1	Married				
	<input type="checkbox"/> 2	Living with your partner				
	<input type="checkbox"/> 3	Have a partner but do not live together				
	<input type="checkbox"/> 4	Separated or divorced				
	<input type="checkbox"/> 5	Widowed				
	<input type="checkbox"/> 6	Single				
<b>24</b>	<b>What is the highest level of education you have completed?</b>					<input type="checkbox"/>
	<input type="checkbox"/> 1	Completed a Degree or higher				
	<input type="checkbox"/> 2	Completed Diploma or certificate				
	<input type="checkbox"/> 3	Completed secondary school to Year 12 (or equivalent)				
	<input type="checkbox"/> 4	Did not complete secondary school				
<b>25</b>	<b>Which of the following best describes your current employment?</b>					<input type="checkbox"/>

	<input type="checkbox"/> 1	Employed full-time	
	<input type="checkbox"/> 2	Employed part-time	
	<input type="checkbox"/> 3	Maternity leave	
	<input type="checkbox"/> 4	Home duties	
	<input type="checkbox"/> 5	Pensioner/ in receipt of government benefits	
	<input type="checkbox"/> 6	Student fulltime	
	<input type="checkbox"/> 7	Student part-time	
	<input type="checkbox"/> 8	Other (please describe) _____ _____ _____	
<b>26</b>	<b>What is the total BEFORE tax income of your household (all family members living at home) usually receives?</b>		<input type="checkbox"/>
	<input type="checkbox"/> 1	Less than \$350 per week (less than \$18,200 per year)	
	<input type="checkbox"/> 2	\$350 - \$649 per week (\$18,200 - \$33,799 per year)	
	<input type="checkbox"/> 3	\$650–\$999 per week (\$33,800–\$51,999 per year)	
	<input type="checkbox"/> 4	\$1000 - \$1399 per week (\$52,000-\$72,999 per year)	
	<input type="checkbox"/> 5	\$1400–\$1999 per week (\$72,800–\$103,999 per year)	
	<input type="checkbox"/> 6	More than \$2000 per week (\$104,000 or more per year)	
<b>27</b>	<b>What is your country of birth?</b>		
<b>28</b>	<b>Is English your first language?</b>		<input type="checkbox"/>
	<input type="checkbox"/> 1	Yes	
	<input type="checkbox"/> 2	No (what is your first language?) _____	
<b>Section five: Questions about your breastfeeding experience</b>			
<b>29</b>	<b>How many children do you have?</b>		<input type="checkbox"/> <input type="checkbox"/>
	<input type="checkbox"/> <input type="checkbox"/> child(ren)		
<b>30</b>	<b>What is the age of your youngest child?</b>		<input type="checkbox"/>
	<input type="checkbox"/> 1	Age in months	
	<input type="checkbox"/> 2	Age in years	
<b>31</b>	<b>How many children have you breastfed?</b>		<input type="checkbox"/> <input type="checkbox"/>

	<input type="text"/> <input type="text"/> child(ren)				
<b>32</b>	<b>How long was the longest you have breastfed any child (including giving expressed breast milk)?</b>				<input type="text"/> <input type="text"/>
	<input type="checkbox"/> 1	<input type="text"/> <input type="text"/> months			
	<input type="checkbox"/> 2	Not sure/ can't remember			
<b>33</b>	<b>Can you please estimate what is the total length of time you have breastfed in your life, adding up all the months you breastfed individual children (including giving expressed breast milk)?</b>				<input type="text"/> <input type="text"/>
	<input type="checkbox"/> 1	<input type="text"/> <input type="text"/> months			
	<input type="checkbox"/> 2	Not sure/ can't remember			
<b>34</b>	<b>Looking back, did you breastfeed your first child for as long as you had planned?</b>				
	<input type="checkbox"/> 1	Yes, I think I breastfed for as long as I would have liked			
	<input type="checkbox"/> 2	No, I did not breastfeed for as long as I would have liked			
	<input type="checkbox"/> 3	Not sure/ can't remember			
	<input type="checkbox"/> 4	I didn't have a plan/ set idea			
	<input type="checkbox"/> 5	I did not breast feed my first child at all			
	<input type="checkbox"/>	Other, comments: _____ _____ _____ _____ _____			
<b>35</b>	<b>Thinking back, how well supported did you feel during your first month of breastfeeding? (please circle one)</b>				<input type="checkbox"/>
	<b>I felt very unsupported</b>	<b>I felt unsupported</b>	<b>I felt neither supported of unsupported</b>	<b>I felt supported</b>	<b>I felt very well supported</b>
	1	2	3	4	5
<b>36</b>	Would you like to make any comments regarding your own breastfeeding experience? _____				
<b>37</b>	<b>Would you be happy for us to contact you if we need to clarify or check any of the information you have provided? This is completely up to you. If so, please write your</b>				



	<p><b>first name, email and phone number in the space below. This information will be kept confidential.</b></p> <p><b>Name:</b></p> <p><b>Email:</b></p> <p><b>Phone:</b></p>
38	<p><b>We are planning to conduct a number of interviews and/or focus groups with volunteer mothers (in addition to the survey). If you would be interested in receiving an invitation to participate in this, please write your first name, email and phone number in the space below. Again, this is completely voluntary, so feel free not to participate.</b></p> <p><b>Name:</b></p> <p><b>Email:</b></p> <p><b>Phone:</b></p>

**Thank you very much for completing this questionnaire. We are grateful for the time you have taken.**

**We would also like to thank you for participating in the RUBY study. We could not undertake this study without your support and your participation at this busy time in your life is greatly appreciated.**

**If you have any questions regarding this questionnaire, please contact:**

**Heather Grimes,  
RUBY volunteer coordinator,  
La Trobe Rural Health School  
PO Box 199,  
Bendigo,  
Vic, 3552**

**03 5448 9113**

**[Ruby.study@thewomens.org.au](mailto:Ruby.study@thewomens.org.au)**

## Appendix P    Email invitation to complete Volunteer Experience Survey

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ringing up about  
**breastfeeding**

Dear RUBY Volunteer,

The RUBY Research Team would like to thank you for your involvement in providing new mothers with breastfeeding support. We appreciate that this is a busy time in your lives and we value the time you have committed to the RUBY study.

An important part of the study is to evaluate your experiences as RUBY volunteers. This will assist us to identify any aspects of your experience that might need to be addressed within this study, as well as help us develop future programs that offer telephone support to breastfeeding mothers.

We would greatly appreciate it if you would complete a questionnaire for us. The answers you provide will give us valuable insights into your experience. The questionnaire is completely anonymous and there is no means of identifying respondents. The questionnaire can be accessed by following the link below. It will take you approximately 10 - 15 minutes. Your participation in this survey is completely voluntary.

[link inserted here]

You will be able to access the questionnaire until [date to be inserted]

We would also be happy to post you a copy of the questionnaire if you would prefer to complete it in hardcopy. To discuss this questionnaire further, do not hesitate to call Heather Grimes on 0429 048 530 or Fiona McLardie-Hore on (03)8345 2932 or email [rubystudy@thewomens.org.au](mailto:rubystudy@thewomens.org.au)

A final request – we are planning to conduct a number of focus groups with volunteer mothers (in addition to the survey), so if you would be interested in being in one of these, please let us know by replying to this email. Again, this is completely voluntary, so feel free not to participate.

The results from this study may appear in academic publications, reports to the RUBY research team and presented at conferences, but no individuals will be identified. If you would like a copy of the study results, please send your name and details by return email. This information will not be linked to your survey.

Yours sincerely,

The RUBY study team

## Appendix Q Focus group interview guide

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**Pass it on... study aims:**

- To explore the views and experiences of volunteers providing proactive telephone support to breastfeeding mothers participating in a RCT
- To conduct a process evaluation of the implementation of the peer support intervention used in the RUBY RCT
- To identify strategies for recruitment, management and retention of volunteers

**Focus group aims:**

- To find out how the participants perceive the role of the volunteer both in terms of their own opinion and in relation to other volunteers
- To find out what factors led to volunteers continuing to participate
- To generate discussion amongst volunteers about their preparation for the role of RUBY volunteer
- To generate discussion about the impact providing telephone peer support had on the volunteers

Volunteer process model*	Theory/ concept	Theme	Question	Prompts
<b>Antecedents</b> <i>Personality, motivations, social connections, demographic characteristics</i>	<i>Functionalist theory:</i> A functional approach to volunteerism suggests that individual outcomes, such as volunteer satisfaction and retention, are more likely when volunteers are able to meet their important goals and motives for their service in their actual activities.  <i>Empathy- altruism model</i> – ‘the ability to take the perspective of a person in need would be heightened by similarity, which could lead to feelings of empathic concern that then predicted helping (Bateson, 1991 in chapter 23 p. 462)	Motivation to volunteer	<b>Can you recall what prompted you to volunteer for RUBY?</b>	Support BF, volunteering, able to do from home
		Expectations of role	<b>Was the role what you expected?</b>	Meeting vols expectations. Satisfaction/ dissatisfaction
		Duration of volunteering	<b>Can you tell me some of the reasons you continued to support mothers for as long as you did?</b>	Sense of commitment – to study, to BF ‘cause’. ‘See it through’ Satisfaction with role  “What makes volunteers decide to remain within organizations seems to be organizational commitment, and what makes them feel happy seems to be feeling engaged to the actions performed in it.” (Vercina et al., 2013)
<b>Experiences</b> <i>Focuses on satisfaction, positive and negative affect, emotional responses to getting involved, training &amp; support</i>	<i>“Role identity ... Two essential constructs in this theory are perceived expectations, which refers to beliefs about how significant others will feel about one’s behaviour, and role identity, which refers to the extent to which a particular behavioural role becomes part of one’s personal identity” (Marta et al., 2014)</i>	Role of the volunteer	<b>Can you tell us about the support you provided to the mothers you were allocated</b>	Social contact for mothers, providing information & encouragement. Following the call schedule
		Preparation for role of providing emotional/ appraisal and informational support	<b>Do you have any comments about the training session you attended before you started in the role?</b>	Did you feel prepared for the role when you started? The first call.

Volunteer process model*	Theory/ concept	Theme	Question	Prompts
	<p><i>CLD concept of peer support.</i> CLD places peer support within the social relationship construct. Theories of supportive relationships</p> <p>Volunteers feelings of <i>self-efficacy</i> in role</p> <p>“Attention might better be given to training methods that would prepare volunteers for distressing situations or provide them with strategies for coping with the distress they do experience”(Davis et al., 2003)</p>			Content and length of session, follow-up sessions, resources such as handbook
<p><b>Consequences</b></p> <p><i>Future intentions, duration of service, well-being of volunteer</i></p>		Impact on you	<b>Can you tell me about how the experience of volunteering was for you personally?</b>	<p>Positive, negative aspects. Anxiety, guilt, intrusion, connection, prosocial activity.</p> <p>What have been the benefits for you? What have been the costs?</p>
	Concluding questions	Do any of you have anything at all that you would like to add?		

\* The VPM identifies the key features of individual volunteering and structures these within three linked stages: antecedents (e.g. demographics, motives); experiences (e.g. satisfaction, organisational commitment) and consequences (e.g. intention to volunteer in future, retention) (Snyder & Omato, 2008)

## Appendix R Focus group consent form

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### Participant Information Sheet: RUBY Volunteer focus groups

**Full Project Title:** Ringing Up about Breastfeeding: a randomised controlled trial exploring earlyY telephone peer support for breastfeeding: RUBY

**Principal Researchers:** Professor Della Forster, Associate Professor Helen McLachlan, Dr Mary-Ann Davey, Associate Professor Lisa Amir, Dr Lisa Gold, Professor Rhonda Small

**Location:** The Royal Women's hospital, Flemington road, Parkville

This Participant Information and Consent Form is 5 pages long. Please make sure you have read all the pages.

#### 1. Your Consent

You are invited to participate in a research study entitled "Ringing Up about Breastfeeding: a randomised controlled trial exploring earlyY telephone peer support for breastfeeding: RUBY"

This Participant Information contains detailed information about the research project. Its purpose is to explain to you as openly and clearly as possible all the procedures involved in this project before you decide whether or not to take part in it.

Please read this Participant Information carefully. Feel free to ask questions about any information in the document. You may also wish to discuss the project with a relative, friend or colleague. Feel free to do this.

Once you understand what the project is about and if you agree to take part in it, you will be asked to sign the Consent Form prior to the focus group commencing. By signing the Consent Form, you indicate that you understand the information and that you give your consent to participate in the research project.

You will receive a copy of the Participant Information and Consent Form to keep as a record.

#### 2. Purpose and Background

The aim of the RUBY study is to find out whether providing breastfeeding support by telephone from another mother who has herself successfully breastfed for six months or more could increase the percentage of women breastfeeding for at least six months.

The purpose of the focus group is to explore your experience of providing support to a new mother. This will enhance our understanding of factors that impact volunteers providing this intervention. The focus group will include a discussion about:

- Your views and experiences as a volunteer
- Why you participated in RUBY
- Your views regarding your preparation for the role of RUBY volunteer

#### 3. Procedures

If you choose to be involved in this part of the study, you will be involved in a focus group of about one hour. The focus group interview will be recorded with your permission and transcribed.

#### **4. Possible Benefits**

You will be given the opportunity to discuss your views and experiences of providing telephone support in the RUBY study, which you may find beneficial.

#### **5. Possible Risks**

We don't anticipate that this study will involve any risks for you.

#### **6. Privacy, Confidentiality and Disclosure of Information**

Information will be stored in locked filing cabinets in a locked office. Only the project coordinator and project investigators will have access to the information. Electronic information will be password protected.

Any information we collect will be retained for 23 years after we have published information from the study in accordance with 2.1.1 of the Australian Code for the Responsible Conduct of Research (2007), which suggests data from clinical trials be kept for this period. All data will then be destroyed in a secure manner.

Any information obtained that can identify you will remain confidential. It will only be disclosed with your permission, except as required by law – however we do not anticipate this will be the case. If you give us your permission by signing the Consent Form, we plan to publish the results in relevant professional journals. In any publication, information will be provided in such a way that you cannot be identified. Your privacy will be maintained. A false name will be used for any direct quotes used.

#### **7. Results of Project**

This study will provide important information about the views of the volunteers providing breastfeeding support by telephone.

The results of the study will be available to you on request and may be presented at conferences or in academic journals.

#### **8. Further Information or Any Problems**

If you require further information or if you have any problems concerning this project you can contact any of the following:

Volunteer Coordinator: Heather Grimes

Project Coordination team: Fiona McLardie-Hore 03 8345 2932, or

Chief Investigator: Professor Della Forster 03 8341 8573

#### **9. Other Issues**

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Consumer Advocate  
Royal Women's Hospital  
Telephone: 03 8345 2900

Alternatively, you may contact La Trobe University Human Ethics Committee on 03 9479- 1443.

#### **10. Participation is Voluntary**

Participation in this project is voluntary. If you do not wish to take part you are not obliged to.

You have the right to withdraw from active participation in this project at any time and further, to demand that data arising from your participation is not used in the research project provided



that this right is exercised within four weeks of the completion of your participation in the project. You are asked to complete the 'Revocation of Consent Form' or to notify the researcher by email or telephone that you wish to withdraw your consent for your data to be used in this research project.

Before you make your decision, a member of the research team will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

## **11. Ethical Guidelines**

This project will be carried out according to the National Statement on Ethical Conduct in Human Research, 2007 produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

The ethical aspects of this research project have been approved by the Human Research Ethics Committee of La Trobe University and the hospitals involved in the trial.

If you have any questions or concerns regarding the study, please feel free to contact myself at any time on the number provided.

Thank you for considering participating in this study.

## **Consent Form: Volunteer focus groups**

**Full Project Title:** Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding: RUBY

I have read, or have had read to me, and I understand the participant information sheet and consent form and any questions that I asked have been answered to my satisfaction. I agree to participate in the project, realising that I may withdraw at any time and may request that no data arising from my participation is used, up to four weeks following the completion of my participation in the research. I understand that interviews will be taped and transcribed. I agree that research data provided by me or with my permission during the project may be included in a thesis, presented at conferences, and published in journals on the condition that neither my name nor any other identifying information is used.

**Participant's Name (block letters)** .....

Signature.....Date.....

**Researcher's Name (printed)** .....

Signature.....

Date.....

*Note:* Both parties signing the Consent Form must date their own signature.

**Optional:** Please write you address in the space below if you would like us to post you a copy of the results:

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## **Revocation of Consent Form: Volunteer's focus groups**

**Full Project Title:** Ringing Up about Breastfeeding: a randomised controlled trial exploring early telephone peer support for breastfeeding: RUBY Health

I hereby wish to WITHDRAW my consent to participate in the research proposal named above and understand that such withdrawal WILL NOT jeopardise my relationship with my employer.

Participant's Name (block letters) .....

Signature.....

Date.....