

# **Towards the Promotion of Normal Birth: Action Research in a Tertiary Maternity Unit in Singapore**

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**A thesis submitted in fulfilment of the requirements for the  
degree of Doctor of Midwifery**

**Centre for Midwifery, Child and Family Health  
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## **CERTIFICATE OF ORIGINAL AUTHORSHIP**

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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## **Dedication**

In loving memory of 'Po po' (Ms. Hiew Mee Yong 1918-2011, Kuala Beliat, Brunei) and 'Ah ma' (Ms. Eu Kaiy Lin 1921-2011, Pulau Bukom Kechil, Singapore)

I dedicate this thesis to both my late maternal and paternal grandmas whom I miss dearly. They have been an inspiration to me in terms of their strength, generosity, courage and resilience – women whom I strongly admire. My grandmas were women of fortitude, who, in spite of the hardships they went through, lived their lives to the fullest. I have always been intrigued by the birth stories they shared openly with me; their own (home) birthing experiences, the births of fellow women in their community, and the practices of birth attendants during their time. My paternal grandma had three homebirths, gave birth to her first child during World War II and raised nine children. My maternal grandma had four children. Unfortunately, she had an accident which severed her right forearm not long after the birth of her fourth child, and she was able to use only her left hand thereafter. It was a difficult time for her; having to take care of the household and very young children.

My grandmothers were my number one fans since the day I became a nurse and later a midwife. They were of the opinion that the 'practice of care' in nursing and midwifery was virtuous, honourable, and therefore, one of the best jobs in the world. It was their strong encouragement and constant support that helped nurture and strengthen my passion in committing to this satisfying vocation of working in partnership with childbearing women over the last 15 years.

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## **ACKNOWLEDGEMENTS**

There seems to be an accepted sequence to writing the Acknowledgements to a doctorate but in the spirit of the thesis on changing practice and culture, I am going to defy convention and start by detailing the path of my doctoral journey and thanking people along the way. If I have let your name escape these pages, I apologise and would like to thank you now from the bottom of my heart. You know who you are.

It has dawned on me that my doctoral candidature has been somewhat akin to a childbearing woman's experience of her first pregnancy, labour and birth – the joys of discovering that one is pregnant, the ups and downs of the pregnancy experience, the labour process, and the birth of the baby. This metaphor is apt to describe the parallels of these journeys (albeit mine being a very lengthy one). Both of these journeys require the continuous support and encouragement of many people.

My doctoral candidature at the University of Technology Sydney (UTS) has been a 'significant' life-changing experience for me. I vividly remember the moments of joy upon receiving news from the University of my acceptance into the candidature – the best Christmas present ever! This candidature has afforded me the opportunity to meet many wonderfully inspiring people who have in their own unique way made it possible for me to take up the challenge to begin and complete this candidature. Thank you to UTS for affording me this opportunity and for the support and consideration along the way.

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I would like to start by thanking my family. My family whose love and unfailing support have been the greatest blessing which I consider myself privileged to have. I want to thank you for your forbearance, and understanding – even when I was at my lowest point. It is your enthusiasm and encouragement that has spurred me on to chase my dream. Thank you for supporting all my decisions, even when I made choices that you might have thought unsuitable.

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## **ABBREVIATIONS**

ACNM	American College of Nurse-Midwives
AMP	Anonymous Maternity Providers survey
AR	Action research
BFHI	Baby Friendly Hospital Initiative
CS	Caesarean section
CST	Critical social theory
EFM	Electronic fetal monitoring
FG	Focus group
MANA	Midwives Alliance of North America
NACPM	National Association of Certified Professional Midwives
NBC	Normal Birth Collaborative workgroup
NICU	Neonatal Intensive Care Unit
NCT	National Childbirth Trust
NHS	National Health Service
PFL	Positions for Labour intervention
PoNB	Promotion of Normal Birth Study
RCM	Royal College of Midwives
SOGC	Society of Obstetrician and Gynaecologists of Canada
TOL	Trial of labour
VBAC	Vaginal birth after CS
WHO	World Health Organization

## **ABSTRACT**

### *Background*

Strategies to promote normal birth are a priority in many high-income countries, where the increasing escalation of caesarean section is an important health concern. There are serious implications associated with caesarean section (and the consequential decrease in normal births) for childbearing women and their families as well as maternity services. Limited information, however, is available on effective and sustainable approaches to address this issue. In particular, research on strategies to promote and support normal birth in tertiary maternity units, where most women in high-income countries give birth to their babies, is scarce.

The Promotion of Normal Birth (PoNB) study focused extensively on working towards the promotion of normal birth and changing the culture within a tertiary maternity unit in Singapore. The study was the country's first hospital-supported effort aimed at promoting normal birth and reducing caesarean section rates.

### *Aims*

The PoNB study was designed to explore how the promotion of normal birth could be encouraged and embedded in the culture within a hospital maternity unit. The study aims were to: (1) promote maternity care practices that support normal birth in a tertiary maternity unit in Singapore; (2) encourage participation among providers of maternity care (midwives, nurses and obstetricians) and consumers (women, who use the service, childbirth educators and doulas), in working together (co-creation) as a 'team' through systematic problem-solving processes to promote normal birth; (3) develop a culture within the tertiary maternity unit that is supportive of normal birth; and (4) develop understanding to inform future developments in the promotion of normal birth that might be able to be applied in other similar settings (i.e. tertiary maternity contexts).

### *Method*

This work was developed and implemented within an Action Research (AR) framework, guided by the philosophy of critical social theory. Six midwives (including the primary researcher) and two obstetricians from the hospital formed the Normal Birth Collaborative

(NBC) action research workgroup. Thematic content analysis of focus groups and descriptive statistical analysis of surveys as well as clinical outcomes informed the action research. In total, over 600 participants (maternity care providers, women, childbirth educators and doulas) were involved in the study.

### *Findings*

An AR framework enabled maternity service staff and consumers to engage in a collaborative process that informed the successful identification, planning and evaluation of a number of initiatives to promote normal birth in the maternity unit. Improvements were made when addressing a number of key characteristics of labour ward culture that were identified as important areas for change. In particular, the Maternal Positions for Labour initiative (PFL) was successful in raising awareness about the identified need to provide an appropriate environment and birthing aids so that women could be supported to move around in labour and adopt positions of their choice. Focus groups with the NBC workgroup members as well as PFL surveys showed that both women and staff members appreciated the opportunities afforded by the intervention.

### *Implications for practice*

The findings from the PoNB study have the potential to impact significantly on efforts to promote normal birth and improve maternity care in Singapore, as well as in similar organisations internationally. The study reinforces the importance of collaboration between maternity service providers and consumers in all phases of changing practice.

## **Presentations related to this research**

The presentations associated with this research study are listed below, starting with the most recent. I have also presented at the bi-annual University of Technology Sydney (UTS) Research Student Forum.

Loh, W. L. L. 'Maternal positions for labour (PFL) project', *Maternity Forum*, National University Hospital, Singapore, April, 2012.

Loh, W. L. L. 'Focus on normal birth and reducing caesarean section rates to a safe minimum: Introducing the Normal Birth Collaborative (NBC) workgroup', *Obstetrics and Gynaecology Grand Round*, National University Hospital, Singapore, April, 2012.

Loh, W. L. L. and Homer, C. S. E. 'Managing engagement: Initial phase of an action research project', *15th East Asian Forum of Nursing Scholars (EAFONS)*, Furama Hotel, Singapore, February, 2012.