# THE REASONS WHY WOMEN WITH SMALL FOR GESTATIONAL AGE BABIES STOP BREASTFEEDING:

A thesis presented in partial fulfilment of the requirements for the
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*"The child you have nourished from within for so many months is ready for nourishment from without. After the birth, your body continues to be your baby's best source of warmth comfort, and food".*

Presser, Storza, Brewer and Freehand, 1983, p.24.

**Abstract**

There has been a multitude of research literature on breastfeeding benefits, incidence and duration of breastfeeding, characteristics of women who breastfeed and formula feed, and variables associated with breastfeeding initiation and success in the 'general' breastfeeding population. Unfortunately there has been very little written about breastfeeding in women who deliver small for gestational age (SGA) babies.

The literature has demonstrated that women with SGA babies have different characteristics to women in the general breastfeeding population as illustrated in the adjacent literature review. The literature review, which accompanies this thesis, has highlighted the multiple advantages associated with breastfeeding, which may be particularly beneficial for SGA babies. Whether women delivering SGA babies have different breastfeeding experiences, or reasons for discontinuing breastfeeding, however has never been investigated.

The research presented in this thesis is part of a randomised-controlled trial entitled "The effect of educational information on the duration of breastfeeding in small for gestational age babies". Only one arm of this larger study has been analysed due to the restraints of a 75-point thesis. The full program of study is in progress. The primary aim of this arm was to determine why women with small for gestation age babies stop breastfeeding. Other influences on breastfeeding success were also investigated to determine if these external influences were statistically significant.

The findings from this research project have demonstrated that women with SGA babies have the same breastfeeding concerns as women in the general breastfeeding population. The most commonly cited reason for stopping breastfeeding were concerns about 'not enough milk'. Forty four percent of the women cited the midwife as being the most 'valuable' support with their breastfeeding experience. Overall the women with SGA babies had very good breastfeeding rates at 3 and 6 months postnatally compared with the general breastfeeding population statistics. This is a credit to the midwives caring for

these women and babies and may also be related to the fact that term SGA babies have been undernourished in utero and can often be hungry babies with 'catching up' to do.

These research findings also support the idea that the introduction of supplementary bottles administered on the postnatal wards can have a detrimental effect on future breastfeeding success. However, small for gestational age infants are at increased risk of hypoglycaemia and supplemental feeding may be necessary if the infant is feeding poorly or shows evidence of hypoglycaemia. Any strategies that can improve the breastfeeding duration for SGA infants can result in a wide range of health benefits. The adjacent literature review demonstrates that breastfeeding is the best form of infant feeding and may be even more so for small term babies.

**Preface**

As an adjunct to this research project a large review of the literature on the benefits of breastfeeding and the literature on SGA babies and breastfeeding was reviewed. Literature on the 'characteristics' of the women who deliver SGA babies was also summarised. This revealed that women with SGA babies are more likely to come from a lower socio economic group, smoke, possibly use recreational drugs and have other medical conditions eg. high blood pressure.

Within the following research project is a smaller literature review specifically relating to women with SGA babies and breastfeeding. This literature reveals that no other studies previously carried out have specifically investigated the breastfeeding experiences of women with SGA babies, and more specifically 'the reasons why women with SGA babies stop breastfeeding'. There is only one previous study that investigates the breastfeeding rates or the variables associated with breastfeeding success in women breastfeeding term SGA babies.

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I am eternally grateful to my husband Kent who supported me both emotionally and financially while I completed my thesis. I am very lucky to have such wonderful support from my family and friends as there have been many times I would have rather spent with them rather than studying.

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## GLOSSARY OF TERMS

The research articles reviewed have statistical abbreviations and medical abbreviations. The following definitions will be used:

Appropriate for Gestational Age (AGA) usually defined as the birth weight between the $10^{th}$ percentile and the $90^{th}$ percentile for gestational age.

Confidence Interval (CI) indicates the precision of an estimate. It conveys more information because it indicates a range of values for the true effect.

Gestational Hypertension (GH) is a diastolic $\geq$90 with an increase of 15 mmHg.

Gestational Proteinuric Hypertension was defined as gestational hypertension and proteinuria of > 300mg/24 hours and/or at least '++' [proteinuria on repeated testing with urine dip sticks, in the absence of urinary tract infections.

Intra-Uterine Growth Restriction (IUGR) is a birth weight below the population $10^{th}$ percentile, corrected for gestational age. Replaced by SGA in recent times.

Low Birth Weight (LBW) refers to all infants whose birth weight is 2500 grams or below, irrespective of the cause and without regard to the duration of gestation.

Milk bank refers to the place where breast milk (donated by other mothers) is stored

Odds Ratio (OR)= odds of event in treatment group/odds of event in comparison group

Otitis media is an inflammation of the middle ear

Relative Risk (RR)= risk of event in treatment group/ risk of event in comparison group

Risk Difference = risk of event in treatment group minus the risk of event in the comparison group, also known as "attributable risk" or absolute risk reduction

SD = standard deviation was defined as a statistic used to measure the variation in a set of scores.

SIDS (sudden infant death syndrome) was defined clinically as the sudden, unexpected death of an apparently healthy infant for which a routine autopsy fails to identify the cause (Schulte, Price, James, 1997, p.184).

Small for Gestational Age (SGA) is a birth weight below the population $10^{th}$ percentile (corrected for gestational age) of an accepted reference.

## ABBREVIATIONS USED IN THIS LITERATURE REVIEW

/ Indicates separation of numerator and denominator

| | |
|---|---|
| AGA | appropriate for gestational age |
| GP | general practitioner |
| GPH | gestational proteinuric hypertension |
| HIV | human immunodeficiency virus |
| IUGR | intrauterine growth restriction |
| LBW | low birth weight |
| LSCS | lower segment caesarean section |
| OR | odds ratio |
| PHC | Public Health Commission |
| RR | relative risk |
| SD | standard deviation |
| SIDS | sudden infant death syndrome |
| SGA | small for gestational age |
| UK | United Kingdom |
| UNICEF | United Nations Children Fund |
| WHO | World Health Organisation |