

**Women's Knowledge, Expectations and Experience of
Induction of Labour
and the Association with Maternal Anxiety**

Soheila Jadidi

A thesis submitted in accordance with the requirements
for admission to the degree of
MASTER OF MIDWIFERY (HONOURS)

UNIVERSITY OF TECHNOLOGY, SYDNEY

March 2012

CERTIFICATE OF AUTHORSHIP/ORIGINALITY

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.

Signature of Candidate

Production Note:

Signature removed prior to publication.

ACKNOWLEDGEMENTS

This research and the production of a thesis has taken me on a very challenging but rewarding journey. I have learnt many things during this project and there are many people to acknowledge and thank for their assistance and guidance in completing my research study.

Firstly I would like to especially thank Maralyn Foureur, as my supervisor for your tireless enthusiasm and standing beside me on the journey. Your speedy wonderful feedback on my work has been particularly appreciated. Thank you for your support and encouraging words when I needed them most. There have been many times when I did not know how to express how grateful I am. To Caroline Homer, my co-supervisor, thank you for your optimism and belief in my ability, the study and its importance to society and health care. I am extremely grateful for the opportunity to have you both as supervisors and mentors.

I would like to thank Georgina Luscombe for her great statistical help and valuable suggestions throughout data analysis. My thanks also go to Julie Swain, whose insightful comments are greatly appreciated. Gratitude is extended to all maternity managers and staff at Blacktown Hospital for their support, time and assistance.

Thank you to all the women for their participation and generously sharing their pregnancy and birthing experiences and their valuable comments, in the hope of improving health care for women and their infants.

Thank you to Mum, you have always supported me in everything I have done and for this I am so grateful. Thank you to my daughters, Sogand and Niki, your support means everything.

My acknowledgement and special thanks must go to Hamid, my best friend, my lover and my soul mate. I thank you for your patience, understanding and unending belief in me, for your constant support and encouragement, and for being the person who makes life so worthwhile.

ABSTRACT

Induction of Labour (IOL) is one of the fastest growing procedures in childbirth in the developed world with one in four women now being induced. The primary purpose of this study was to further develop the understanding of women's knowledge, expectations and experiences of IOL in order to identify whether women's views may be contributing factors to the increasing rate of IOL. A descriptive and correlational study design, using pre and post IOL surveys, captured the views of a convenience sample of pregnant women booked for any type of IOL at Blacktown Hospital in 2009 and 2010. Consenting women were given self-administered, pre and post-IOL questionnaires and the Spielberger State-Trait Anxiety Inventory. One hundred and nine women experienced IOL and completed both pre and post IOL surveys; of these, 98 linked surveys were eligible to be analysed using SPSS v 18. Both simple descriptive and multivariate analyses were undertaken.

The majority of participants (85.7%) acknowledged they agreed to have an IOL because they were worried about problems with their baby if the pregnancy continued. Most (59.1%) acknowledged a midwife as their most important care provider as well as the most common source of information (61.2%). Although 96.9% of women expressed the importance of information concerning IOL, only 75% were satisfied with the information they received prior to the process. While the majority of participants (97.9%) were satisfied with the care they received from midwives, overall, 13.4% did not have a satisfying IOL experience.

More than 21% of women expected to give birth within six hours and only 15% of participants expressed the length of their labour was around what they expected. While 7.1% came with no expectation regarding labour pain, 67.8% rated their pain as 'much more/ more painful' than they expected.

These results revealed that many women did not have realistic expectations of IOL. Satisfaction with childbirth was higher for women who had a birth experience that was better than expected. In addition, there was a significant relationship between women's realistic expectations and their satisfaction with IOL. However a positive relationship between women's knowledge and their satisfaction with IOL was not found in this study. There was a significant relationship between women's level of knowledge and

their State anxiety level before undergoing IOL. Furthermore women who had more realistic expectations were less anxious after experiencing IOL. Being well informed by the midwife was the strongest predictor for satisfaction in this study ($p < 0.001$). In addition those participants who had more realistic expectations were less anxious after their IOL.

The results of this study add to our understanding of women's wishes and views towards induction of labour within an Australian context. The importance of being well informed by the midwife suggests a professional responsibility to ensure that women are provided with accurate and timely information regarding IOL in order to set realistic expectations to achieve a positive childbirth experience.

TABLE OF CONTENTS

CERTIFICATE OF AUTHORSHIP/ORIGINALITY	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
LIST OF FIGURES	x
ABBREVIATIONS	xi
CHAPTER I: INTRODUCTION	1
MY POSITION IN THIS RESEARCH.....	1
BACKGROUND TO THE STUDY AND SIGNIFICANCE OF THE ISSUE.....	3
DEFINITION OF IOL.....	5
A BRIEF HISTORY OF IOL.....	5
<i>Prevalence of IOL.....</i>	8
RISKS INVOLVED WITH IOL.....	11
<i>IOL increases requirement for pain relief.....</i>	11
<i>IOL increases continuous fetal monitoring and its attendant risks.....</i>	12
<i>IOL increases operative vaginal birth.....</i>	13
<i>IOL increases the risk of caesarean section.....</i>	14
<i>IOL increases the risk of cord prolapse.....</i>	17
<i>IOL increases the risk of uterine hyperstimulation.....</i>	17
<i>IOL increases the risk of uterine rupture.....</i>	18
<i>IOL increases the risk of postpartum haemorrhage (PPH).....</i>	18
<i>IOL increases the risk of amniotic fluid embolism (AFE).....</i>	18
<i>IOL increases the risk of neonatal mortality and admission to neonatal intensive care unit (NICU).....</i>	19
<i>Further complications and consequences.....</i>	20
SUMMARY.....	21
STRUCTURE OF THE THESIS.....	22
CHAPTER II: REVIEW OF THE LITERATURE	24
INTRODUCTION.....	24
SEARCHING THE LITERATURE.....	24
CONTEXTS OF CHILDBIRTH IN THE 20 TH AND 21 ST CENTURIES.....	26
MATERNAL EXPECTATIONS AND SATISFACTION WITH THE BIRTH EXPERIENCE.....	27

<i>Maternal expectations</i>	28
<i>Satisfaction with the childbirth experience</i>	29
SIGNIFICANT VARIABLES ASSOCIATED WITH WOMEN'S EXPECTATIONS AND EXPERIENCE.....	31
<i>Feeling in control</i>	32
<i>Involvement in making decisions</i>	33
<i>Support by a labour companion (partner/family/doula)</i>	34
<i>Midwife-led care and continuity of care</i>	35
<i>Being informed</i>	38
<i>Obstetric interventions</i>	41
<i>Pain management</i>	43
MATERNAL ANXIETY AND ITS RELATIONSHIP TO WOMEN'S KNOWLEDGE, EXPECTATIONS AND EXPERIENCE.....	45
MATERNAL RESPONSE AND ATTITUDES TO IOL.....	49
<i>Seminal Studies of IOL</i>	49
A MODIFIED REPLICATION OF A UK STUDY.....	55
SUMMARY.....	56
STUDY HYPOTHESES.....	58
CHAPTER III: STUDY DESIGN AND METHOD.....	60
AIM OF THE STUDY.....	60
DESIGN OF THE STUDY.....	60
SETTING.....	60
DESCRIPTION OF THE SAMPLE.....	61
<i>Culturally diversity and representativeness of the sample</i>	61
<i>Sample size</i>	61
<i>Inclusion criteria</i>	62
<i>Exclusion criteria</i>	62
<i>Calculation of eligible population</i>	62
DATA COLLECTION PROCEDURE.....	63
<i>Routine practice at Blacktown Hospital</i>	64
<i>Participant recruitment</i>	64
<i>Follow up procedure</i>	65
STUDY INSTRUMENTS.....	65

<i>Piloting of the questionnaires in Australia</i>	66
<i>Final questionnaires</i>	66
<i>State-Trait Anxiety Inventory (STAI)</i>	67
DATA ENTRY.....	68
DATA ANALYSIS.....	68
<i>Development of the analysis tools</i>	69
<i>Analysis of association between variables</i>	71
<i>Predictors</i>	71
<i>Time of administration</i>	71
ETHICAL CONSIDERATIONS.....	72
STUDY RESOURCES.....	73
SUMMARY.....	73
CHAPTER IV: RESULTS OF THE STUDY.....	74
INTRODUCTION.....	74
DESCRIPTION OF THE SAMPLE.....	74
<i>Response rate</i>	74
<i>Demographic profile</i>	75
<i>Maternal baseline characteristics and expectations pre-IOL</i>	77
<i>Maternal experience of labour and birth</i>	83
<i>Women's comments about their IOL experience</i>	89
<i>Maternal anxiety pre and post-IOL</i>	93
RESULTS FROM TESTING THE HYPOTHESES.....	94
1) <i>Hypothesis: There is an association between women's level of knowledge of induction and their satisfaction level</i>	95
2) <i>Hypothesis: There is an association between women's realistic expectations and their level of satisfaction with childbirth</i>	96
3) <i>Hypothesis: Satisfaction with childbirth is higher for women who have a birth experience that is better than expected than for those who have a birth experience that is worse than expected</i>	96
4) <i>Hypothesis: There is an association between women's level of knowledge of induction and their State anxiety before the IOL process</i>	97
5) <i>Hypothesis: There is an association between women's level of knowledge of induction and their State anxiety after the IOL process</i>	97

6) Hypothesis: There is an association between women's expectations and their State Anxiety level post-IOL.....	98
VARIABLES THAT PREDICT EXPECTATIONS, KNOWLEDGE AND SATISFACTION.....	99
<i>Expectations regression model</i>	99
<i>Knowledge regression model</i>	100
<i>Satisfaction regression model</i>	101
SUMMARY.....	101
CHAPTER V: DISCUSSION AND CONCLUSION	103
INTRODUCTION.....	103
MATERNAL SATISFACTION WITH THE EXPERIENCE OF IOL.....	103
<i>Future birth preference</i>	104
<i>Having expectations met</i>	104
<i>Involvement in making decisions</i>	105
<i>State anxiety level post-IOL</i>	106
<i>Being informed</i>	106
<i>Midwife-led care</i>	111
MATERNAL ANXIETY BEFORE AND AFTER IOL PROCEDURE.....	112
<i>Women's worries</i>	113
<i>Women's wishes regarding IOL</i>	114
<i>Obstetric interventions</i>	114
LIMITATIONS AND RECOMMENDATIONS.....	115
IMPLICATIONS FOR MIDWIFERY RESEARCH.....	118
CONCLUSION.....	118
REFERENCES	120
Appendix A: Hospital Booking Form.....	145
Appendix B: Inclusion criteria	147
Appendix C: Exclusion criteria	149
Appendix D: Study information sheet	151
Appendix E: Consent forms	154
Appendix F: Study recruitment flow chart	160
Appendix G: Participants' labels.....	162
Appendix H: Pre-induction questionnaire	164

Appendix I: Post-induction questionnaire	174
Appendix J: SWAHS HREC approval letter	182
Appendix K: UTS HREC approval letter	186

LIST OF TABLES

Table 1: Rates of women experiencing IOL in Blacktown Hospital 2005-2008.....	62
Table 2: Calculation of eligible population in 2008**	63
Table 3: Pre and Post-IOL Questionnaire Response rates	75
Table 4: Participant's demographics	76
Table 5: Maternal baseline characteristics and expectations pre-induction.....	78
Table 6: Source of information (N: 98)	82
Table 7: Labour and birth data	84
Table 8: Pain relief during labour (N: 97)	85
Table 9: Comparison of the source of information (N: 98)	86
Table 10: Induction of labour experience and satisfaction	87
Table 11: The most frequent themes identified from the open-ended questions	90
Table 12: Aggregated total score details for anxiety, expectations, knowledge and satisfaction (N: 98)	95
Table 13: The association between women's level of knowledge and their satisfaction.	95
Table 14: The association between women's level of expectation and their satisfaction	96
Table 15: The association between women's level of knowledge and State anxiety level pre-IOL	97
Table 16: The association between women's level of knowledge and State anxiety level post-IOL	98
Table 17: The association between women's level of expectation and their State anxiety post-IOL	98
Table 18: The regression models of predictors for women's expectations of IOL and their satisfaction	100

LIST OF FIGURES

Figure 1: State Anxiety level pre-IOL	93
Figure 2: State Anxiety level post-IOL	93
Figure 3: Trait Anxiety level	93

ABBREVIATIONS

ACOG	American College of Obstetricians and Gynaecologists
AFE	Amniotic Fluid Embolism
ARM	Artificial Rupture of Membranes
AWHONNC	Association of Women's Health, Obstetric and Neonatal Nurses of Canada
CI	Confidence Intervals
CS	Caesarean Section
CTG	Cardiotocograph
DIC	Disseminated Intravascular Coagulopathy
DOCs	Department of Community Services
EFM	Electronic Fetal Monitoring
FHR	Fetal Heart Rate
GP	General Practitioner
IOL	Induction Of Labour
NICE	National Institute for Health and Clinical Excellence
NICU	Neonatal Intensive Care Unit
NHS	National Health Service
NSW	New South Wales
NSWDH	New South Wales Department of Health
PG	Prostaglandin
PPH	Post Partum Haemorrhage
PTSD	Post Traumatic Stress Disorder
OR	Odds Ratios
RANZCOG	The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RCOG	Royal College of Obstetricians and Gynaecologists
RDS	Respiratory Distress Syndrome
SPSS	Statistical Package for Social Sciences
SROM	Spontaneous Rupture of Membranes
STAI	State Trait Anxiety Inventory
SWAHS	Sydney West Area Health Service

UK	The United Kingdom
US/USA	The United State of America
WHO	World Health Organization