

Women's Psychosocial Outcomes after Receiving Cardiotocography (CTG) or ST-Analysis (STan) Fetal Monitoring During Labour: An Australian Pilot Randomised Control Trial

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This thesis is submitted in partial fulfilment of the Honours Degree of Bachelor of Psychological Science

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October 2016

Word Count: 11,434

Table of Contents

List of Tables and figures	5
List of Abbreviations	6
Abstract	7
Presentations Based on this Thesis	8
Declaration	9
Acknowledgments.....	10
Chapter 1- Introduction	Error! Bookmark not defined.
1.1 Background: Maternity Care and Fetal Monitoring	Error! Bookmark not defined.
1.2 Defining the Biopsychosocial Model.....	Error! Bookmark not defined.
1.2.1 Biopsychosocial model in maternity health.....	Error! Bookmark not defined.
1.3 Defining Fetal Monitoring	Error! Bookmark not defined.
1.3.1 Defining Cardiotocography (CTG).	Error! Bookmark not defined.
1.3.2 Defining ST-analysis (STan).	Error! Bookmark not defined.
1.4 Caesarean Sections in Australia.....	Error! Bookmark not defined.
1.5 The Interrelated Physical and Psychological Impact of Caesareans.....	Error! Bookmark not defined.
1.5.1 Caesarean section and postnatal depression (PND).	Error! Bookmark not defined.
1.5.2 Caesareans and infant feeding.	Error! Bookmark not defined.
1.6 Other Psychosocial Implications of EFM.....	Error! Bookmark not defined.
1.6.1 Satisfaction with fetal monitoring.....	Error! Bookmark not defined.
1.6.2 Women’s views of the scalp clip.	Error! Bookmark not defined.
1.6.3 Satisfaction with STan.....	Error! Bookmark not defined.
1.7 Women’s Maternity Care Preferences: Risk, Choice and Control .	Error! Bookmark not defined.
1.7.1 Choice and control.....	Error! Bookmark not defined.
1.7.2 Women’s perceptions of risk and trade-offs.....	Error! Bookmark not defined.
1.8 The current study	Error! Bookmark not defined.
<i>Aims and Hypotheses</i>	Error! Bookmark not defined.
Chapter 2-Method.....	Error! Bookmark not defined.
2.1 Participants	Error! Bookmark not defined.
2.1.1 Demographic characteristics.....	Error! Bookmark not defined.
2.2 Procedure	Error! Bookmark not defined.
2.3 Measures	Error! Bookmark not defined.

2.3.1 Demographic variables	Error! Bookmark not defined.
2.3.2 Satisfaction with care.....	Error! Bookmark not defined.
2.3.3 Physical and mental health	Error! Bookmark not defined.
2.3.4 Infant feeding practices	Error! Bookmark not defined.
2.4 Data Analysis	Error! Bookmark not defined.
2.4.1 Data screening	Error! Bookmark not defined.
2.4.2 Power Analysis	Error! Bookmark not defined.
2.4.3 Preliminary Analysis	Error! Bookmark not defined.
2.4.4 Bootstrapped confidence intervals.....	Error! Bookmark not defined.
2.4.5 Thematic analysis	Error! Bookmark not defined.
Chapter 3- Results.....	Error! Bookmark not defined.
3.1 Clinical characteristics.....	Error! Bookmark not defined.
3.2 Aim 1: STan and CTG compared on satisfaction with overall care and experience during labour	Error! Bookmark not defined.
3.2.1 STan and CTG compared on satisfaction with overall early labour experiences (ELE), staff care, distress and wellbeing.....	Error! Bookmark not defined.
3.2.2 STan and CTG compared on satisfaction with care during the intrapartum period	Error! Bookmark not defined.
3.3 Aim 2: Women’s experiences and satisfaction with the EFM they received. ...	Error! Bookmark not defined.
3.3.1 Aim 2.1: The positives and negatives of EFM	Error! Bookmark not defined.
2.3.2 Aim 2.2: STan and CTG compared on satisfaction with EFM.....	Error! Bookmark not defined.
3.3.3 Aim 2.3: The association between satisfaction with EFM, intrapartum care and experiences during labour.....	Error! Bookmark not defined.
3.3.4 Aim 2.4: Exploring Women’s trade-off’s in relation to EFM	Error! Bookmark not defined.
3.5.1 Aim 3: STan and CTG compared on physical and psychosocial outcomes... 	Error! Bookmark not defined.
3.2.5 STan and CTG compared on Infant feeding.....	Error! Bookmark not defined.
Chapter 4- Discussion	Error! Bookmark not defined.
4.1 Overview	Error! Bookmark not defined.
4.2 Aim 1: STan and CTG compared on satisfaction with overall care and experience during labour	Error! Bookmark not defined.
4.3 Aim 2: Women’s experiences and satisfaction with the EFM they received.....	Error! Bookmark not defined.
4.3.1 Aim 2.1: The positives and negatives of EFM	Error! Bookmark not defined.

4.3.2 Aim 2.2: STan and CTG compared on satisfaction with EFM	Error! Bookmark not defined.
4.3.3 Aim 2.3: The Association between Satisfaction with EFM, Intrapartum Care and Experiences during Labour.....	Error! Bookmark not defined.
4.3.4 Aim 2.4: Exploring Women’s trade-off’s in relation to EFM	Error! Bookmark not defined.
4.4 Aim 3: STan and CTG compared on physical and psychosocial outcomes.....	Error! Bookmark not defined.
4.5 Strengths	Error! Bookmark not defined.
4.5.1 Originality and contribution to knowledge.....	Error! Bookmark not defined.
4.5.2 Randomized Controlled Trials (RCT).	Error! Bookmark not defined.
4.5.3 The addition of qualitative methods.	Error! Bookmark not defined.
4.5.4 Piloting of the questionnaire.....	Error! Bookmark not defined.
4.6 Limitations	Error! Bookmark not defined.
4.6.1 Low response rate and sample size.....	Error! Bookmark not defined.
4.6.1.2 <i>Increasing response rate.</i>	Error! Bookmark not defined.
4.6.2 External validity.	Error! Bookmark not defined.
4.6.3 Priming of open-ended questions	Error! Bookmark not defined.
4.6.4 Low Cronbach’s alpha.....	Error! Bookmark not defined.
4.6.5 The exclusion of women with adverse outcomes....	Error! Bookmark not defined.
4.6.6 Data did not reach saturation	Error! Bookmark not defined.
4.7 Conclusion.....	Error! Bookmark not defined.
Citation list	Error! Bookmark not defined.
Appendix A: Package Mailed to Participants: Invitation letter, Information Sheet, Consent Form & Questionnaire	Error! Bookmark not defined.
Invitation letter	Error! Bookmark not defined.
Participant Information Sheet:.....	Error! Bookmark not defined.
Participant Consent Form	Error! Bookmark not defined.
Hard Copy Questionnaire	Error! Bookmark not defined.
Appendix B: Reminder Letter	Error! Bookmark not defined.
Appendix C: Online Questionnaire	Error! Bookmark not defined.
Appendix D: Data Analysis – Selected Outputs.....	Error! Bookmark not defined.
Bootstrapped Proportions	Error! Bookmark not defined.
Bootstrapped Mean Differences.....	Error! Bookmark not defined.
Selected Scatter Plots	Error! Bookmark not defined.
Shapiro-Wilk	Error! Bookmark not defined.

Correlation Analysis Error! Bookmark not defined.
Trade-off Responses..... Error! Bookmark not defined.
Examples of Open-ended Reponses Error! Bookmark not defined.
Appendix E: Conference Slides Error! Bookmark not defined.
Beacon Conference Slides Error! Bookmark not defined.
Australasian Conference for Undergraduate Research Slides Error! Bookmark not defined.

List of Tables and Figures

<u>Table 1</u> <i>Aims and Hypotheses</i>	<u>15-16</u>
<u>Table 2.</u> <i>Demographic Characteristics</i>	<u>18</u>
<u>Table 3.</u> <i>STan and CTG Groups Compared on Timeframes Between Labour and Completion of the Questionnaire</i>	<u>22</u>
<u>Table 4.</u> <i>STan and CTG Groups Compared on Clinical Characteristics</i>	<u>31</u>
<u>Table 5</u> <i>STan and CTG Groups Compared on Labour Experience and Satisfaction</i>	<u>32</u>
<u>Table 6.</u> <i>Pearson’s Product-Moment Correlation (with bootstrapped BCa levels of significance) between Satisfaction with EFM, Quality of Care and Overall Experience of Labour</i>	<u>41</u>
<u>Table 7.</u> <i>Trade-off questions</i>	<u>42</u>
<u>Table 8.</u> <i>STan and CTG Groups Compared on Mental and Physical Health..</i>	<u>46</u>
<u>Figure 1.</u> <i>Approximate flow of participation and response rate</i>	<u>20</u>
<u>Figure 2.</u> <i>Thematic Map of Codes and Themes</i>	<u>35</u>
<u>Figure 3.</u> <i>Percentage of Responses for Trade-off 1 - Reassurance over Movement</i>	<u>43</u>
<u>Figure 4.</u> <i>Percentage of Responses for Trade-off 2- Healthy Baby over Invasiveness</i>	<u>43</u>
<u>Figure 5.</u> <i>Percentage of Responses for Trade-off 3- Invasiveness over Unnecessary Caesarean</i>	<u>44</u>
<u>Figure 6.</u> <i>Percentage of Responses for Trade-off 4 – Reassurance over Physical Comfort</i>	<u>44</u>
<u>Figure 7.</u> <i>Percentage of Responses for Trade-off 5 –Physical Comfort over Better Outcomes</i>	<u>45</u>

List of Abbreviations

<u>EFM</u>	Electronic Fetal Monitoring
<u>STan</u>	<u>ST-Analysis</u>
<u>CTG</u>	<u>Cardiotocography</u>
<u>ELE</u>	Early Labour Experience
<u>PND</u>	<u>Postnatal Depression</u>
<u>WCH</u>	<u>Women's and Children's Hospital</u>
<u>WCHN HREC</u>	<u>Women's and Children's Health Network Human Research Ethics Committee</u>
<u>BCa</u>	Bias-Corrected and Accelerated
<u>ELEQ</u>	<u>Early Labour Experience Questionnaire</u>
<u>MDU</u>	Midwifery Development Unit Labour Satisfaction Scale
<u>GHQ</u>	General Health Questionnaire
<u>EPNS</u>	Edinburgh Postnatal Depression Scale
<u>S-EFM</u>	Satisfaction with Electronic Fetal Monitoring
<u>WHO</u>	World Health Organisation
<u>ABS</u>	Australian Bureau of Statistic
<u>DSM-5</u>	Diagnostics and Statistics Manuel – 5 th edition

Abstract

A common intervention to ensure the health of the fetus and mother during labour is electronic fetal monitoring (EFM). Standard practice for EFM in Australia is cardiotocography (CTG), which has a high false positive rate leading to unnecessary intervention such as caesarean delivery. The Women's and Children's Hospital is currently trialling a new technology, ST-Analysis (STan), which is used in conjunction with CTG. STan provides greater information to clinicians, allowing for more precise decision making thus leading to fewer unnecessary emergency caesareans. As a result, better outcomes such as lower levels of mental illness and better physical health are anticipated in the postnatal period. This pilot study aims to compare women via a randomised control trial on psychosocial outcomes after receiving either STan or CTG-only. No differences were observed between the treatment groups on satisfaction with EFM, early labour experiences and care. Based on thematic analysis on the positives and negatives of EFM, six themes were reported: perceived clinical errors, concern about EFM, experiences with staff, reassurance, comfort and more clinical information allowing for better decision making. When compared on mental and physical health outcomes, there was no variation between the two treatment groups except on subjective mental health, where the CTG-only group exhibited better mental health outcomes. Based on this pilot study, there seems to be no psychosocial advantage of including STan in the labour ward, however, more research is needed to replicate these findings.

Keywords: STan, ST-Analysis, CTG, cardiotocography, fetal monitoring, electronic fetal monitoring, maternity care, postnatal, satisfaction, psychosocial

Presentations Based on this Thesis

Digenis, C. (2016, August). An Australian Pilot Randomised Control Trial of Women's Psychosocial Outcomes Comparing STan and CTG Electronic Fetal Monitoring. Presentation at Beacon Conference for Undergraduate Research, Adelaide, South Australia. (See Appendix E for slides).

Digenis, C. (2016, October). An Australian Pilot Randomised Control Trial of Women's Psychosocial Outcomes Comparing STan and CTG Electronic Fetal Monitoring. Presentation at Australasian Conference for Undergraduate Research, Rockhampton, Queensland. See Appendix E for slides).

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and, to the best of my knowledge, this thesis contains no materials previously published except where due reference is made.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

Christianna Digenis**December, 2016**

Acknowledgments

I would like to express my sincere gratitude to my supervisors Professor Deborah Turnbull, Associate Professor Chris Wilkinson and Dr Amy Salter. Thank you for introducing me to such an interesting and important topic, your expertise and guidance have been invaluable. I appreciate your warm, encouraging and dedicated supervision throughout. To our program coordinator, Dr Carolyn Semmler; thank you for your support in what has been a challenging year.

I would like to acknowledge the women who participated in this study; it has been a privilege to learn about and share your experiences.

To the honours cohort of 2016, your friendship and support has been amazing. I feel fortunate to have spent this year among such amazing peers. I would also like to acknowledge the wonderful women on level seven, you are all inspiring. Thank you for your help and company throughout this year.

To my loving family, I appreciate you for instilling in me the value of hard work and education. To Pippa, your cuddles, enthusiastic greetings and love of walks have helped me stay sane. To my friends for giving me a much needed outlet and especially to Thomas, thank you for your love, encouragement and tolerance, I could not have done this without you.