

Abstract

Comparing Breastfeeding Outcomes of Australian Women Who Birth by Elective and Non-Elective Caesarean Section [†]

Lauren Papalia ^{1,2}, Sarah G. Abelha ³, Jacki L. McEachran ^{4,5,6}, Stuart J. Watson ^{1,2,7}, Linda McKean ^{1,2}, Stuart A. Prosser ^{3,4,5,6}, Donna T. Geddes ^{4,5,6} and Sharon L. Perrella ^{4,5,6,*}

- ¹ School of Nursing, Curtin University, Bentley, WA 6102, Australia; 12874417@student.curtin.edu.au (L.P.); stuart.watson@health.wa.gov.au (S.J.W.); linda.mckean@health.wa.gov.au (L.M.)
- ² King Edward Memorial Hospital, Subiaco, WA 6008, Australia
- ³ Western Obstetrics, Balcatta, WA 6021, Australia; sarahabelha@live.com.au (S.G.A.); stuart@westernobs.com.au (S.A.P.)
- ⁴ School of Molecular Sciences, The University of Western Australia, Crawley, WA 6009, Australia; jacki.mceachran@uwa.edu.au (J.L.M.); donna.geddes@uwa.edu (D.T.G.)
- ⁵ ABREAST Network, Perth, WA 6000, Australia
- ⁶ UWA Centre for Human Lactation Research and Translation, Crawley, WA 6009, Australia
- ⁷ Psychology, Murdoch University, Murdoch, WA 6150, Australia
- * Correspondence: sharon.perrella@uwa.edu.au; Tel.: +61-64881208
- [†] Presented at the Australian Breastfeeding + Lactation Research and Science Translation Conference (ABREAST Conference 2023), Perth, Australia, 10 November 2023.

Abstract: Caesarean section birth (CS) accounts for 38% of Australian births and is known to negatively impact breastfeeding exclusivity and duration. Comparison of breastfeeding outcomes between elective (ELUSCS) and non-elective lower uterine segment caesarean section (NELUSCS) births is needed to inform clinical care. Secondary analysis was performed on data from Australian women who had birthed by CS within the previous 12 months and completed an anonymous online questionnaire. Women responded to items relating to CS birth type and feeding methods immediately post birth, during the hospital stay and in the first 2 weeks at home. Self-reported pain at those time points was rated using a scale of 0–10 with 0 indicating no pain and 10 indicating severe pain. Associations between CS birth type, pain scores and feeding methods were determined, and breastfeeding prevalence at the time of survey completion examined. Our sample consisted of 851 women at 5 ± 3.5 months postpartum, of which 435 (51.1%) were primiparous and 362 (42%) had a NELUSCS birth. Infants born by NELUSCS were more likely to receive formula (37.1% vs. 28.8% ELUSCS, $p = 0.024$) and less likely to be breastfed (78.6% vs. 85.9% ELUSCS, $p = 0.022$) during the hospital stay. During the 2 weeks after discharge, women who birthed by NELUSCS had higher mean pain scores (6.5 vs. 4.6 ELUSCS, $p < 0.001$). Few women expressed and fed their milk in the weeks after discharge, with higher rates seen after NELUSCS (7.7% vs. 3.5%, $p = 0.017$). Breastfeeding status at study completion was not associated with CS birth type (19.6% ELUSCS vs. 19% NELUSCS, $p = 0.99$). The study findings indicate that Australian women who give birth by NELUSCS are more likely to experience breastfeeding challenges, with higher rates of infant formula supplementation and a more painful recovery in the days and weeks after birth. In light of the higher postpartum pain scores and lower rates of exclusive breastfeeding, women who birth by NELUSCS need additional postpartum support.

Keywords: caesarean section; elective; non elective; breastfeeding; infant formula; pain



Citation: Papalia, L.; Abelha, S.G.; McEachran, J.L.; Watson, S.J.; McKean, L.; Prosser, S.A.; Geddes, D.T.; Perrella, S.L. Comparing Breastfeeding Outcomes of Australian Women Who Birth by Elective and Non-Elective Caesarean Section. *Proceedings* **2023**, *93*, 21. <https://doi.org/10.3390/proceedings2023093021>

Academic Editors: Debra J. Palmer and Nicolas L. Taylor

Published: 9 January 2024



Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Author Contributions: Conceptualization, S.L.P., S.G.A., S.A.P. and D.T.G.; methodology, S.L.P., S.G.A. and J.L.M.; software, J.L.M.; formal analysis, L.P. and S.J.W.; investigation, S.L.P. and S.G.A.; resources, D.T.G.; data curation, J.L.M.; writing—original draft preparation, L.P.; writing—review

and editing, S.L.P., D.T.G. and L.M.; supervision, S.L.P. and L.M.; project administration, L.P. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding. The salaries of D.T.G. and S.L.P. were funded by an unrestricted research grant from Medela AG (Switzerland) and administered by The University of Western Australia. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of Human Research Ethics Committee of The University of Western Australia (approval number: 2022/ET000174 10/08/2023). Reciprocal ethics approval was granted from Curtin University Human Research Ethics Office (approval number: HRE2023-0505, approval date 07/09/2023).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Acknowledgments: We thank all of our participants for their time and help with this research.

Conflicts of Interest: D.T.G. declares participation in the Scientific Advisory Board of Medela AG. D.T.G. and S.L.P. are supported by an unrestricted research grant from Medela AG, administered by The University of Western Australia. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results. All other authors declare no conflicts of interest.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.