

Understanding the Relationship between Bariatric Surgery and Mental Health Outcomes: A  
Systematic Review and Meta-Analysis

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B Psych (Hons)

This thesis is presented in partial fulfilment of the requirements for the degree of Master of  
Clinical Psychology, School of Psychology, University of Newcastle, Australia

November 2020

## **Declarations**

### **Statement of Originality**

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library\*, being made available for loan and photocopying subject to the copyright Act 1968.

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**Acknowledgement of Collaboration**

I hereby certify that the work embodied in this thesis has been done in collaboration with other researchers. I have included as part of this thesis a statement clearly outlining the extent of collaboration, with whom and under what auspices.

I contributed to the development of the research question, the database search, the statistical analysis, the interpretation of results and editing of the manuscript. Rev Dr Martin Johnson (Senior lecturer) contributed to the development of the research question and original database search. Dr Tanya Hanstock (Primary Supervisor) contributed to the development of the research question and editing of the manuscript. Associate Professor Stefania Paolini (Secondary Supervisor) contributed to the refinement of the research question, the development of processes relating to the selection criteria for the study, the interpretation of results, and editing of the manuscript. Brendon Scott (previous PhD candidate) contributed to the development of the research question, exclusion criteria, coding protocol, and the peer review process relating to identification of eligible articles as well as establishing interrater reliability.

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### **Acknowledgements**

Firstly, to Rev Dr Martin Johnson, thank you for providing the inspiration and initial guidance for this project. To Brendan Scott, thank you for your support, your contributions and for helping me establish this project.

To Associate Professor Stefania Paolini, thank you for your immense technical support regarding structure and running of the meta-analysis. I am grateful for your generosity in time, energy and wisdom to help support me through my first experience of a meta-analysis. To Danielle Anderson, thank you for your support in navigating the statistical minefield of CMA.

To Dr Tanya Hanstock, thank you for stepping in and providing support, guidance and knowledge in bringing together this thesis. Without your encouragement and confidence in me, this project would not have been able to continue.

To Dr Scott Brown, thank you for advocating for this project and for facilitating my continuation when things seemed impossible. I am thankful for your confidence in the project and myself.

To my mum Dinah, thank you for always being there to support, encourage, and comfort me through this wild ride. You have always been behind me, encouraging me to push beyond where I could possibly imagine, and for that I will be forever grateful. To my dad Michael, I know how proud you would be to know that I finally made it here.

To my wonderful, beautiful Bree. You have been my rock, and it is your love, support and understanding that has made this dream a reality. I don't think I'll ever be able to put into words what it means to have you there for me.

Finally, to our incredible daughter Elsie. You have been my inspiration throughout this journey. I hope one day when I show you this and tell you about when you were a tiny baby, you'll feel proud of how our little family achieved something so big.

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Manuscript for submission to the journal Clinical Psychology Review (see Appendix A for the Instructions to Authors for this journal)

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### Abstract

Obesity is a global health problem associated with a large range of physical and psychological comorbidities. Bariatric surgery is a technique utilised in the management of physiological aspects of obesity, however this often does not address underlying mental health symptoms. The purpose of the current study was to conduct a systematic review and meta-analysis to investigate the relationship between bariatric surgery and four key mental health outcomes: anxiety, depression, disordered eating and quality of life. A total of 42 articles contributing 101 samples ( $N=6,541$ ) were included. In the main analyses conducted, a positive, significant relationship with small to medium effect sizes were identified between bariatric surgery outcomes and reduced depression ( $r=0.33$ ), anxiety ( $r=0.18$ ), disordered eating ( $r=0.32$ ) as well as increased quality of life ( $r=0.27$ ). Moderation analyses were conducted to explore relationships with age, gender, primary language, bariatric surgery type, pre- and post-surgery BMI, and time differences between baseline and follow-up measurements. Significant relationships were identified between gender and disordered eating, as well as the time between measurement points with both depression and disordered eating. Overall, the current study reinforced key findings previously established in the literature as well as identifying several critical areas for further research within the field.

**Key words:** Bariatric surgery, mental health, depression, anxiety, eating disorders, quality of life.