

PREVENTING MENTAL HEALTH PROBLEMS IN CHILDREN AND ADOLESCENTS: STRENGTHENING RESILIENCE AS A POTENTIAL APPROACH

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MARCH, 2018

This PhD research was supported by an Australian Government Research
Training Program (RTP) Scholarship.

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I hereby certify that the work embodied in the thesis is my own work, conducted under normal supervision.

The thesis contains published scholarly work of which I am a co-author. For each such work a written statement, endorsed by the other authors, attesting to my contribution to the joint work has been included.

The 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 the final version of my thesis being made available worldwide when deposited in the University's Digital Repository, subject to the provisions of the Copyright Act 1968 and any approved embargo.

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ACKNOWLEDGEMENTS

The completion of this thesis would not have been possible without the generous support of many.

Firstly, to all my supervisors, Prof Jenny Bowman, Dr Libby Campbell, Dr Megan Freund, and Prof John Wiggers. Thank you for sharing your years of expertise, for your continual support, for accepting my strange nick names for each of my thesis chapters and at times naive optimism towards research processes, and for teaching me to critically analyse the crap out of life. As much as I'd like to say 'I'll take it from here' I'm more than sure I'll continue to call on your generous mentorship for years to come. In particular, I'd like to give some special thanks to Jenny who took on the role of my primary supervisor. Among many things you are generous, genuine, caring, compassionate, relentless, honest, gracious, dependable, open-minded, and intelligent beyond words – I am so very grateful to have had you by my side throughout my candidature. Thanks for riding the roller coaster with me and for stopping to share the champagne moments.

To the Healthy Schools, Healthy Futures (HSHF) team, including our project managers, project officers, casual data collection staff, research assistants, administrative staff, statistical support staff, school staff, students, and school communities, and everyone involved, thank you for being the man power behind a very large research trial. Additionally, thank you to the Aboriginal Cultural Steering Group for providing Aboriginal cultural advice and direction regarding the design, implementation, evaluation and dissemination of all research trial elements for the duration of the research project, and members of the HSHF Cultural Advice Group and external Aboriginal Health reviewers for their on-going advice and review of

manuscript drafts that now form chapters of this thesis. An extra special shout out to Christophe Lecathelinais for persevering with the provision of statistical support across each of my PhD papers – I particularly enjoyed each new addition to your wall of artwork by Pascal; knowledge of all things math, finance and computer related, and; your tolerance of insulting statements regarding how superior Prosecco is to Champagne. I would also like to acknowledge the generous funding from the National Health and Medical Research Council and the nib Foundation, the in-kind support from Hunter New England Population Health, and the Hunter Institute of Mental Health, and infrastructure support from the Hunter Medical Research Institute that made this research possible. Further, my PhD Candidature was supported by the Australian Government Research Training Program (RTP), and funding from the University of Newcastle, Australia.

To the future Dr Bryant (aka Dr Grammar) you are worth your weight in gold. I will be ever grateful for your superior proofing skills, tea-making ability, generous heart, and unwavering friendship. To my other fellow PhD soldiers: Danika Tremain (and therapy puppies), Rebecca Hodder, Jacqueline Bailey, Caitlin Fehily, Tameka Small, Amanda Williams, Kate O'Brien, Lubna Abdul Razak, Emma Robson and others - and the newly appointed Dr Kate Bartlem, Dr Kathleen McElwaine, Dr Alex Metse and Dr Jannah Jones – thanks for sharing your brilliant minds, caring personalities and coping strategies, and for genuinely being there along the way. To the wider Physical Health in Mental Illness (PHiMI) research team, thanks for sharing your space, resources, and tireless leader, and for the bursts of helping hands throughout this process.

To my extended friends and family – thanks for supporting my endeavour to become Dr Dray, for showing genuine interest in my research even if at times your

questions were answered with what seemed like incoherent rambles, and for sticking around even when finding time to catch up proved quite difficult. My soccer team – the ever wonderful Frullets and Betty – thanks for the exercise on crisp Sunday mornings and mosquito ridden training nights, the love and laughs, for accepting my uniqueness especially my love for unicorns, and for being a giant cheer squad backing myself and every other team member through their chosen pathways in life. To Liz Bird, thank you for taking on the tedious task of editing my thesis, for showing genuine interest in my work along the way, and for regularly shifting your availability to work in with some fluid circumstances whilst still maintaining such a professional standard.

Now for the tearjerkers. To my parents, Colin and Jandy, thank you for encouraging me to follow my dreams, for your unconditional love, and the pride I see in your eyes for me. Nine years ago, I flew the coop from the safe and familiar bounds of your home and my small country hometown, and you told me not to look back. Two university degrees later, I am grateful you never let me quit. To my selfless, gorgeous sister Mel, thank you for supplying me with an endless stream of photos and videos of that beautiful little niece of mine, Anna, to keep me grounded along the way – what a beautiful reminder to never lose our curiosity, energy or love in life; and thanks for just being my sister. I know you'll always be by my side throughout life with the endless love, care, generosity and encouragement that you have always given me – sisters that run together stay together, 'my sister, sister'. To 'Poppy Pig', thanks for captivating me for long hours of conversations about experiences of life and love on my trips back to your farm and during our long duration, long distance phone calls, and for reminding me of just how resilient people can be.

To my husband Sean. For much of, if not all of, the length of my PhD, you have juggled the equivalent of three jobs plus completion of a Bachelor of Law and still

managed to love a Unikitty me, your petite unicorn. At times when I started to break, you helped me bend again; and when I felt like I had no more self-belief you never stopped believing in me. You took all hangry moments in your stride and showed a level of patience beyond compare. Thank you for handling many break downs and sharing many triumphs – I know you say you often don't feel like you understand, but when the nights keep me from sleeping you are my remedy – Thank you for loving me. Nothing else matters, xz.

Finally, and this may seem strange to others, but I'd like to thank myself. Thank you self for forgiving me when I pushed you close to burnout and took your health for granted, for persevering, and embracing what was at times pretty steep curves of personal and professional growth. Doubt kills more dreams than failure ever will! I look back on this journey and I am proud of me.

LIST OF PUBLICATIONS INCLUDED IN THESIS

Chapter 2: Dray, J., Bowman, J., Freund, M., Campbell, E., Hodder, R. K., Lecathelinais, C., & Wiggers, J. (2016). Mental health problems in a regional population of Australian adolescents: association with socio-demographic characteristics. *Child and Adolescent Psychiatry and Mental Health*, 10(32). doi: 10.1186/s13034-016-0120-9

Chapter 3: Dray, J., Bowman, J., Wolfenden, L., Campbell, E., Freund, M., Hodder, R., & Wiggers, J. (2015). Systematic review of universal resilience interventions targeting child and adolescent mental health in the school setting: review protocol. *Systematic Reviews*, 4(186). doi: 10.1186/s13643-015-0172-6

Chapter 4: Dray, J., Bowman, J., Campbell, E., Freund, M., Wolfenden, L., Hodder, R. K., McElwaine, K., Tremain, D., Bartlem, K., Bailey, J., Small, T., Palazzi, K., Oldmeadow, C., Wiggers, J. Systematic review of universal resilience interventions targeting child and adolescent mental health in the school setting. *Journal of the American Academy of Child and Adolescent Psychiatry*, 56(10): 813-824. doi:10.1016/j.jaac.2017.07.780

Chapter 5: Dray, J., Bowman, J., Freund, M., Campbell, E., Wolfenden, L., Hodder, R. K., & Wiggers, J. (2014). Improving adolescent mental health and resilience through a resilience-based intervention in schools: study protocol for a randomised controlled trial. *Trials*, 15(289). doi: 10.1186/1745-6215-15-289

Chapter 6: Dray, J., Bowman, J., Campbell, E., Freund, M., Hodder, R. K., Wolfenden, L., Richards, J., Leane, C., Green, S., Lecathelinais, C., Oldmeadow, C., Attia, J., Gillham, K., Wiggers, J. Effectiveness of a school-based universal intervention targeting student resilience protective factors on mental health problems in adolescents: a cluster-randomised controlled trial. *Journal of Adolescence*, Volume 57, June 2017, 74-89. doi.org/10.1016/j.adolescence.2017.03.009.

CO-AUTHOR STATEMENT

I attest that Research Higher Degree candidate Julia Dray has contributed to publications for which I am a co-author. For all publications, where applicable, Julia has:

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- Contributed to research design and methodology
- Contributed to the development and modification of data collection tools
- Contributed to intervention design
- Managed or participated in data collection procedures
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ADDITIONAL PUBLICATIONS AND PRESENTATIONS

Papers:

Dray J, Bowman J, Campbell E, Freund M, Hodder R, Wiggers J. A longitudinal investigation of adolescent mental health problems using matched cohort data: overall trends and gender differences. [In draft].

Hodder R, Freund M, Wolfenden L, Bowman J, Gillham K, **Dray J**, Wiggers J. Systematic review of universal school-based resilience interventions targeting adolescent tobacco, alcohol or illicit drug use: review protocol. *BMJ Open*, 2014, 4:5, DOI: 10.1136/bmjopen-2013-004718

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Bullen C, Hodder R, Campbell E, Freund M, **Dray J**, Bowman J. Resilience to the mental health impacts of school bullying victimisation: the role of internal and external protective factors. [In draft].

Published conference abstracts:

Dray J, Freund M, Bowman J, Campbell E, Wiggers J, Wolfenden L, Hodder R, Gillham K. *Mental health and resilience in adolescence: a resilience-based intervention. International Journal of Behavioural Medicine* 2014; 21(S1): S203.

Dray J, Freund M, Bowman J, Campbell E, Hodder R, Wiggers J, Gillham K. *The mental health of adolescents: what differences exist? International Journal of Behavioural Medicine* 2014; 21(S1): S22

Dray J, Bowman J, Campbell E, Freund M, Wiggers J, Wolfenden L, Hodder R, Gillham K. *Exploring the potential of a school-based intervention in Australia on mental health problems and resilience in adolescents: a cluster randomised trial. Journal of the Canadian Academy of Child and Adolescent Psychiatry* 2016; 25(S1): O23.2 (pp. 68).

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Hodder R, Freund M, Bowman J, Wolfenden L, Gillham K, **Dray J**, Wiggers J.

Tobacco, alcohol and illicit drug use in adolescents: does resilience matter?

International Journal of Behavioural Medicine 2014; 21(S1): S153.

Hodder R, Freund M, Wolfenden L, Bowman J, Nepal S, **Dray J**, Kingsland M, Yoong

S, Wiggers J. *Systematic review of universal school-based ‘resilience’ interventions*

targeting adolescent tobacco, alcohol or illicit substance use. International Journal of Behavioural Medicine 2016; 23(S1): S82.

Hodder R, Freund M, Bowman J, Wolfenden L, Campbell E, **Dray J**, Lecathelinais C,

Oldmeadow C, Attia J, Wiggers J. *Effectiveness of a school-based protective factor*

intervention in reducing adolescent tobacco, alcohol and illicit substance use.

International Journal of Behavioural Medicine 2016; 23(S1): S90.

Hodder R, Freund M, Bowman J, Wolfenden L, Campbell E, **Dray J**, Lecathelinais C,

Oldmeadow C, Attia J, Wiggers J. *Effectiveness of a universal school-based*

intervention in reducing adolescent tobacco, alcohol and illicit substance use within student subgroups: exploratory assessment. International Journal of Behavioural

Medicine 2016; 23(S1): S91.

Conference presentations:

*presenting author

Dray J*, Freund M, Bowman J, Campbell E, Wiggers J, Gillham K. *The mental health*

and wellbeing of adolescents: what differentials exist? Oral presentation: Public

Health Association of Australia Conference, September 2013; Melbourne, Australia.

Dray J*, Freund M, Bowman J, Campbell E, Hodder R, Wiggers J, Gillham K. *The risk of mental health problems among adolescents: prevalence and socio-demographic differences*. Poster presentation: 13th International Congress of Behavioural Medicine, August 2014; Groningen, The Netherlands.

Dray J*, Freund M, Bowman J, Campbell E, Wiggers J, Wolfenden L, Hodder R, Gillham K. *Mental health and resilience in adolescence: a resilience-based intervention*. Oral presentation: 13th International Congress of Behavioural Medicine, August 2014; Groningen, The Netherlands.

Dray J*, Freund M, Bowman J, Campbell E, Wiggers J, Gillham K. *The mental health and well-being of adolescents: what differentials exist?* Oral presentation: Australian Positive Psychology and Well-being Conference, February 2014; Melbourne, Australia.

Dray J*, Freund M, Bowman J, Campbell E, Wiggers J, Wolfenden L, Hodder R, Gillham K. *Mental health and resilience in adolescence: a school-based resilience intervention*. Oral presentation: Australian Positive Psychology and Well-being Conference, February 2014; Melbourne, Australia.

Trindall S, O'Brien K, Freund M, Campbell E, Gillham K, Hodder R*, **Dray J**, Tully B, Wiggers J. *Resilience in Australian Aboriginal secondary school students*. Poster presentation: 22nd Australian Health Promotion Association and 18th Chronic Disease Network, September 2014; Alice Springs, Australia.

Hodder R*, Freund M, Bowman J, Wolfenden L, Gillham K, **Dray J**, Wiggers J. *Tobacco, alcohol and illicit drug use in adolescents from disadvantaged areas: does*

resilience matter? Oral presentation: 22nd Australian Health Promotion Association and 18th Chronic Disease Network, September 2014; Alice Springs, Australia.

Hodder R*, Freund M, Bowman J, Wolfenden L, Gillham K, **Dray J**, Wiggers J.

Tobacco, alcohol and illicit drug use in adolescents: does resilience matter? Oral presentation: 13th International Congress of Behavioural Medicine, August 2014; Groningen, The Netherlands.

Dray J, Freund M, Bowman J*, Campbell E, Hodder R, Wiggers J, Gillham K. *The*

mental health of adolescents: what differentials exist? Oral presentation:

Australasian Society for Behavioural Health and Medicine 12th Annual Scientific Meeting, February 2015; Perth, Australia.

Dray J, Freund M, Bowman J, Campbell E, Wiggers J*, Wolfenden L, Hodder R,

Gillham K. *Mental Health and Resilience in Adolescence: exploring the potential of a resilience-based intervention in schools.* Oral presentation: Australasian Society for Behavioural Health and Medicine 12th Annual Scientific Meeting, February 2015; Perth, Australia.

Dray J, Freund M, Bowman J, Campbell E, Wiggers J, Wolfenden L, Hodder R,

Gillham K. *A school-based resilience intervention in Australia: intervention efficacy in relation to fostering internal and external resilience factors and mental health in adolescents.* Oral presentation (accepted, not presented): Pathways to Resilience III: Beyond nature vs. nurture! June 2015; Halifax, Canada.

Dray J, Freund M, Bowman J, Campbell E, Wiggers J, Wolfenden L, Hodder R,

Gillham K. *A school-based resilience intervention in Australia: exploring the relationship between resilience and risk of mental health problems.* Poster

presentation (accepted, not presented): Pathways to Resilience III: Beyond nature vs. nurture! June 2015; Halifax, Canada.

Hodder R*, Freund M, Bowman J, Wolfenden L, Gillham K, **Dray J**, Wiggers J.

Adolescent tobacco, alcohol and illicit drug use: does resilience matter? Oral

presentation: Population Health Congress, September 2015; Hobart, Australia.

Hodder R, Freund M, Bowman J, Wolfenden L, **Dray J**, Kingsland M, Yoong S,

Eftekhari P, Wiggers J. *Are universal school-based resilience interventions targeting adolescent substance use effective? Results of a systematic review.* Poster

presentation: Pathways to Resilience III: Beyond nature vs. nurture! June 2015;

Halifax, Canada (accepted, not presented).

Hodder R, Freund M, Bowman J, Wolfenden L, Gillham K, **Dray J**, Wiggers J. *The*

potential of resilience in substance use prevention: a resilience factor profile of

Australian adolescents and associations with tobacco, alcohol and illicit

substance use. Oral presentation: Pathways to Resilience III: Beyond nature vs.

nurture! June 2015; Halifax, Canada (accepted, not presented).

Hodder R*, Freund M, Bowman J, Wolfenden L, Gillham K, **Dray J**, Wiggers J.

Tobacco, alcohol and illicit drug use in adolescents: does resilience matter? Oral

presentation: Australasian Society for Behavioural Health and Medicine. 12th

Annual Scientific Meeting, February 2015; Perth, Australia.

Hodder R*, Freund M, Wolfenden L, Bowman J, Nepal S, **Dray J**, Kingsland M,

Yoong S, Wiggers J. *Systematic review of universal school-based ‘resilience’*

interventions targeting adolescent tobacco, alcohol or illicit substance use. Oral

presentation: The 14th International Congress of Behavioural Medicine,
December 2016; Melbourne, Australia.

Hodder R*, Freund M, Bowman J, Campbell E, Wolfenden L, **Dray J**, Lecathelinais C,
Oldmeadow C, Attia J, Wiggers J. *Effectiveness of a school-based universal
protective factor intervention in reducing tobacco, alcohol and illicit substance use
in a population of adolescents: cluster-randomised controlled trial*. Poster
presentation: The 14th International Congress of Behavioural Medicine, December
2016; Melbourne, Australia.

Hodder R*, Freund M, Bowman J, Campbell E, Wolfenden L, **Dray J**, Lecathelinais C,
Oldmeadow C, Attia J, Wiggers J. *Effectiveness of a universal school-based
intervention in reducing tobacco, alcohol and illicit substance use within student
subgroups: exploratory assessment*. Poster presentation: The 14th International
Congress of Behavioural Medicine, December 2016; Melbourne, Australia.

Hodder R, Freund M, Bowman J, Wolfenden L, Campbell E, **Dray J**, Lecathelinais
C, Oldmeadow C, Attia J, Wiggers J. *Effectiveness of a school-based universal
protective factor intervention in reducing tobacco, alcohol and illicit substance
use in a population of adolescents: cluster-randomised controlled trial*. Oral
presentation: 23rd National Conference of the Australian Health Promotion
Association (accepted, not presented), June 2016; Perth, Australia.

Hodder R, Freund M, Wolfenden L, Bowman J, Nepal S, **Dray J**, Kingsland M,
Yoong S, Wiggers J. *Are universal school-based protective factor interventions
effective in reducing adolescent tobacco, alcohol and illicit substance use:
results from a systematic review*. Oral presentation: 23rd National Conference of

the Australian Health Promotion Association (accepted, not presented), June 2016; Perth, Australia.

Hodder R*, Freund M, Bowman J, Wolfenden L, Campbell E, **Dray J**, Lecathelinais C, Oldmeadow C, Attia J, Wiggers J. *Effectiveness of a school-based universal protective factor intervention in reducing alcohol use in a population of adolescents: cluster-randomised controlled trial*. Oral presentation: 42nd Annual Alcohol Epidemiology Symposium of the Kettil Bruun Society, May 2016; Stockholm, Sweden.

Hodder R*, Freund M, Wolfenden L, Bowman J, Nepal S, **Dray J**, Kingsland M, Yoong S, Wiggers J. *Are universal school-based protective factor interventions effective in reducing adolescent alcohol use: results from a systematic review*. Oral presentation: 42nd Annual Alcohol Epidemiology Symposium of the Kettil Bruun Society, May 2016; Stockholm, Sweden.

Dray J*, Bowman J, Campbell E, Freund M, Hodder R, Wolfenden L, Richards J, Leane C, Green S, Lecathelinais C, Oldmeadow C, Attia J, Gillham, K, Wiggers J. *Effects of a school-based, universal, resilience-focussed intervention on student mental health problems and protective factors*. Oral presentation: 4th International Association for Youth Mental Health Conference, September 2017; Dublin, Ireland

AWARDS

Australian Government Research Training Program Scholarship (formerly
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Faculty of Science and IT Research Higher Degree International Conference
Scholarship (2016)

Priority Research Centre for Health Behaviour Small Grant (2016)

Three-Minute Thesis University of Newcastle Finalist (2015)

TABLE OF CONTENTS

STATEMENT OF ORIGINALITY	i
STATEMENT OF AUTHORSHIP	ii
PERMISSION REGARDING COPYRIGHT	iii
ACKNOWLEDGEMENTS	v
LIST OF PUBLICATIONS INCLUDED IN THESIS	ix
CO-AUTHOR STATEMENT	x
ADDITIONAL PUBLICATIONS AND PRESENTATIONS	xiii
AWARDS.....	xxii
TABLE OF CONTENTS.....	xxiii
LIST OF TABLES	xxxiv
LIST OF FIGURES	xxxvi
LIST OF APPENDICES	xxxviii
ABSTRACT.....	xl

CHAPTER 1: INTRODUCTION: MENTAL HEALTH AND RESILIENCE IN CHILDREN AND ADOLESCENTS

1. Chapter Purpose and Structure	2
2. Mental health, illness, disorder and problems	2
3. Mental health problems	3
3.1 Global burden and prevalence	3
3.2 Burden and prevalence in Australia	5
4. Mental health problems in children and adolescents	6
4.1 Global burden and prevalence	6
4.2 Burden and prevalence in Australia	9
4.3 Trends in overall prevalence in recent decades	10

4.4 Differences in prevalence by socio-demographic factors	12
5. Prevention of mental health problems in children and adolescents.....	15
6. A possible role for resilience?	16
7. Resilience-focussed interventions to improve child and adolescent mental health.	18
8. Thesis aims	24
9. Thesis structure	25
References	27

CHAPTER 2: MENTAL HEALTH PROBLEMS IN A REGIONAL POPULATION OF AUSTRALIAN ADOLESCENTS: ASSOCIATION WITH SOCIO-DEMOGRAPHIC CHARACTERISTICS

Abstract	41
Background	41
Methods.....	43
Study design and setting.....	43
Ethics, consent and permissions	43
Sample and recruitment.....	43
Secondary schools	43
Student sample.....	43
Measures.....	43
Mental health problems	43
Student characteristics	44
Statistical analysis.....	44
Student characteristics	44
Mental health problems.....	44
Investigating associations between mental health problems and socio- demographic characteristics.....	44
Results	45

Sample	45
Mental health problems	45
Associations between mental health problems and socio-demographic characteristics	45
Discussion	47
Conclusion	49
Abbreviations	49
Authors' contributions	49
Author details	49
Acknowledgments.....	50
Competing interests.....	50
Availability of data and materials	50
Ethics approval and consent to participate.....	50
Funding	50
References	50

CHAPTER 3: SYSTEMATIC REVIEW OF UNIVERSAL RESILIENCE INTERVENTIONS TARGETING CHILD AND ADOLESCENT MENTAL HEALTH IN THE SCHOOL SETTING: REVIEW PROTOCOL

Abstract	53
Background	54
Objective	55
Methods.....	55
Eligibility criteria	55
Study characteristics	55
Participants.....	55
Study design.....	55
Setting	55

Primary outcomes	55
Intervention	55
Exclusion criteria	56
Publication characteristics	56
Information sources	56
Electronic databases.....	56
Other sources	56
Search strategy	56
Study records.....	56
Data management	56
Study selection process.....	56
Data extraction	56
Data items.....	56
Assessment of risk of bias	57
Data analysis.....	57
Data synthesis and analysis	57
Issues of clustering	57
Assessment of reporting bias.....	57
Confidence in cumulative evidence	57
Ethics and dissemination	57
Discussion	58
Appendix 1: Database(s): Ovid MEDLINE® 1946 to present with daily update	58
Abbreviations	58
Competing interests.....	58
Author's contributions	58
Acknowledgements	58
Author details	58

References	58
------------------	----

CHAPTER 4: SYSTEMATIC REVIEW OF UNIVERSAL RESILIENCE INTERVENTIONS TARGETING CHILD AND ADOLESCENT MENTAL HEALTH IN THE SCHOOL SETTING

Abstract	62
Background	62
Method	63
Study inclusion criteria.....	63
Study type	63
Outcome measures.....	63
Setting and intervention.....	63
Search Methods	64
Study selection process	64
Data extraction	64
Data analysis and synthesis	64
Assessment of risk of bias	64
Assessment of reporting bias and confidence in cumulative evidence.....	64
Results	64
Included studies.....	64
Intervention characteristics.....	65
Risk of bias in included studies.....	66
Quality assessment of included studies	66
Effect of intervention.....	66
All trials	66
Effect of intervention by age	66
Child trials (5-10 years)	66
Adolescent trials (11-18 years)	66

Effect of intervention by gender.....	66
Effect of intervention by length of follow-up	68
Short-term follow-up	68
Long-term follow-up	68
Exploratory subgroup analysis	68
Heterogeneity	68
Discussion	68
Declarations.....	71
References	71
Supplementary tables published online.....	74
References for included trials.....	102

CHAPTER 4: ADDITIONAL APPENDICES

Supplementary Appendix A	113
Supplementary Table 1 Classification of protective factors utilised to determine study eligibility during screening stages of the current review	113
Supplementary Appendix B	116
Forest plots relating to meta-analysis results for the comparison of a resilience- focussed intervention versus control	116
Supplementary Appendix C	122
Forest plots relating to meta-analysis results for the comparison of resilience- focussed intervention versus an alternate resilience-focussed intervention	122
Supplementary Appendix D	124
Funnel plots for primary analysis of all studies, comparison: intervention versus control, by mental health outcome.....	124
Chapter 4 Supplementary Appendices References	128

CHAPTER 5: IMPROVING ADOLESCENT MENTAL HEALTH AND RESILIENCE THROUGH A RESILIENCE-BASED INTERVENTION IN

SCHOOLS: STUDY PROTOCOL FOR A RANDOMISED CONTROLLED TRIAL

Abstract	131
Background	131
Methods/design	132
Study design	132
Participants	132
School sample.....	132
School recruitment.....	132
Random allocation of schools.....	133
Student sample.....	133
Student recruitment.....	133
Intervention	134
Intervention content	134
Health-promoting intervention strategies targeting resilience.....	134
Intervention adoption strategies	134
School intervention officers.....	135
Monitoring and feedback.....	135
Financial resources	135
Cultural advice.....	135
School core team.....	135
Structured planning process.....	135
Control group	135
Data collection procedures	135
Measures.....	136
Student demographics.....	136
Primary outcome: risk of mental health problems.....	136

Secondary outcome: resilience	136
Sample size.....	136
Primary outcome: risk of mental health problems.....	136
Statistical analysis	137
Analysis of demographic characteristics	137
Analysis of primary outcome: risk of mental health problems.....	137
Discussion	137
Trial status.....	137
Abbreviations	137
Competing interests.....	137
Authors' contributions	137
Acknowledgements	137
Author details	137
References	137

CHAPTER 6: EFFECTIVENESS OF A SCHOOL-BASED UNIVERSAL INTERVENTION TARGETING STUDENT RESILIENCE PROTECTIVE FACTORS IN REDUCING MENTAL HEALTH PROBLEMS IN ADOLESCENTS

Abstract	141
Background	141
Methods.....	143
Study design, setting and sample	143
Secondary schools	143
Randomisation of schools	143
Student sample	143
School staff.....	143
Intervention	143

Control group	145
Measures	145
Student characteristics	145
Primary outcome: mental health problems.....	145
Secondary outcomes: student internal and external protective factors	145
Implementation of strategies targeting protective factors	146
Sample size.....	146
Statistical analysis	146
Student characteristics	146
Mental health problems	146
Subgroup analyses	146
Student internal and external protective factors	147
Implementation of strategies targeting protective factors	147
Results	147
Sample	147
Mental health problems	147
Subgroup analyses	147
Student internal and external protective factors	147
Intervention strategy implementation.....	147
Discussion	150
Declaration of interest.....	152
Contributions.....	152
Availability of data and material.....	152
Funding	152
Acknowledgments.....	152
Abbreviations	153
References	153

Supplementary tables published online.....	157
References referred to in Supplementary Tables	165

CHAPTER 7: SUMMARY OF KEY FINDINGS AND IMPLICATIONS

Introduction	168
Summary of Key Study Findings	168
Chapter 2: Mental health problems and associations with socio-demographic characteristics in a regional population of Australian adolescents.....	168
Chapters 3 and 4: Systematic review of universal resilience interventions targeting child and adolescent mental health in the school setting.....	170
Chapters 5 and 6: A pragmatic, universal, school-based, resilience-focussed intervention for mental health problems in adolescents	173
Limitations	176
Strengths and Key Contributions to the Field	177
Implications for Research	179
1. Measurement and monitoring of the prevalence of mental health problems in children and adolescents.....	179
1.1. A need for ongoing national surveys and the identification and use of quality measurement tools	179
1.2. A need to monitor mental health in specific population groups	181
2. Enhancing understanding of how resilience protective factors relate to mental health problems in children and adolescents	183
2.1. Evidence contributed by systematic reviews examining associations between mental health problems and protective factors	187
2.2. Evidence contributed by trials included in the Chapter 4 systematic review	192
3. A need to conduct quality intervention trials to optimally inform the field.....	196
3.1 Provide clarity and rationale for conceptual underpinning and intervention content.....	196
3.2 Ensure sound mental health outcome measurement and reporting.....	198
3.3 Ensure sound protective factor measurement and reporting.....	200

3.4 Examine differential intervention effect for subgroups	200
Conclusions	202
References	204

LIST OF TABLES

CHAPTER 2: MENTAL HEALTH PROBLEMS IN A REGIONAL POPULATION OF AUSTRALIAN ADOLESCENTS: ASSOCIATION WITH SOCIO-DEMOGRAPHIC CHARACTERISTICS

Table 1 Cut-points used to report score ranges for each SDQ outcome	44
Table 2 Descriptive statistics of participating students demographics	45
Table 3 Prevalence of scores in the ‘close to average’, ‘slightly raised’, ‘high’ and ‘very high’ range for total SDQ and three SDQ subscales.....	45
Table 4 Mean scores and standard deviations for total SDQ, internalising, externalising and prosocial SDQ subscales by socio-demographic factors.....	46
Table 5 Results of final linear mixed models of socio-demographics by mental health problems.....	47

CHAPTER 3: SYSTEMATIC REVIEW OF UNIVERSAL RESILIENCE INTERVENTIONS TARGETING CHILD AND ADOLESCENT MENTAL HEALTH IN THE SCHOOL SETTING: REVIEW PROTOCOL

Appendix 1: Table 1 Search Strategy.....	58
--	----

CHAPTER 4: SYSTEMATIC REVIEW OF UNIVERSAL RESILIENCE INTERVENTIONS TARGETING CHILD AND ADOLESCENT MENTAL HEALTH IN THE SCHOOL SETTING

Table 1 Summary of effects	67
Table S1 Characteristics of Included Studies (Ordered Child: Author, Year; Adolescent: Author, Year)	74
Table S2 Group Characteristics of Studies Included in Meta-Analyses for the Comparison of Control vs. Intervention	97

CHAPTER 4: ADDITIONAL APPENDICES

Supplementary Table 1 Classification of protective factors 1-20 utilised to determine study eligibility during screening stages of the current review	113
---	-----

CHAPTER 6: EFFECTIVENESS OF A SCHOOL-BASED UNIVERSAL INTERVENTION TARGETING STUDENT RESILIENCE PROTECTIVE FACTORS IN REDUCING MENTAL HEALTH PROBLEMS IN ADOLESCENT

Table 1 Intervention strategies and implementation support strategies	144
Table 2 Descriptive statistics of baseline survey participant characteristics by treatment group	149
Table 3 Adjusted intervention vs. control group outcomes at follow-up.....	149
Table 4 Intervention versus control group implementation of strategies targeting protective factor comparisons in final year of intervention	151
Supplementary Table 1 Primary and secondary outcome measures	157
Supplementary Table 2 Cut-points used for each SDQ outcome in subgroup analysis by baseline mental health problem levels	158
Supplementary Table 3 Primary outcomes by gender, adjusted for treatment group ...	159
Supplementary Table 4 Primary outcomes by baseline level of mental health problems, adjusted for treatment group	160
Supplementary Table 5 Examples of strategies that schools implemented to address the intervention strategies	162

CHAPTER 7: SUMMARY OF KEY FINDINGS AND IMPLICATIONS

Table 1 Factors relating to resilience developed from a literature review and/or consultation process	185
Table 2 Factors identified for focus in resilience interventions developed from expert consensus using a Delphi process	186
Table 3 Systematic reviews examining associations between mental health problems and protective factors	189
Table 4 Summary of results of included trials from the Chapter 4 review that included a measure of protective factors (PFs)	194
Table 5 Summary of Chapter 4 included trials that incorporated mediation analysis ..	195
Supplementary Table 1 Mapping of targeted protective factors against measured protective factors, for 37 trials included in Chapter 4 incorporating a measure of protective factors	216

LIST OF FIGURES

CHAPTER 4: SYSTEMATIC REVIEW OF UNIVERSAL RESILIENCE INTERVENTIONS TARGETING CHILD AND ADOLESCENT MENTAL HEALTH IN THE SCHOOL SETTING

Figure 1 Study Flow Diagram..... 65

Figure S1 Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies 100

Figure S2 Risk of bias summary: review authors' judgements about each risk of bias item for each included study (+, ?, and - or green, yellow, red circles represent low, unclear, or high bias ratings, respectively)..... 101

CHAPTER 4: ADDITIONAL APPENDICES

Figure S1.1 Forest plot of comparison: intervention versus control; child, adolescent and all trials; outcome: depressive symptoms 116

Figure S1.2 Forest plot of comparison: intervention versus control; child, adolescent and all trials; outcome: anxiety symptoms..... 117

Figure S1.3 Forest plot of comparison: intervention versus control; child studies; outcome: hyperactivity..... 117

Figure S1.4 Forest plot of comparison: intervention versus control; child, adolescent and all trials; outcome: conduct problems 118

Figure S1.5 Forest plot of comparison: intervention versus control; child, adolescent and all trials; outcome: internalising problems 118

Figure S1.6 Forest plot of comparison: intervention versus control; child, adolescent and all trials; outcome: externalising problems 118

Figure S1.7 Forest plot of comparison: intervention versus control; child, adolescent and all trials; outcome: general psychological distress..... 119

Figure S1.8 Forest plot of comparison: intervention versus control; all trials; short-term follow-up (≤ 12 months) subgroup analysis; outcome: all outcomes 120

Figure S1.9 Forest plot of comparison: intervention versus control; all trials; long-term follow-up (> 12 months) subgroup analysis; outcome: all outcomes 121

Figure S2.1 Forest plot of comparison: resilience-focussed intervention versus alternate resilience-focussed intervention; child, adolescent and all trials; outcome: depressive symptoms	122
Figure S2.2 Forest plot of comparison: resilience-focussed intervention versus alternate resilience-focussed intervention; all trials (all adolescent); outcome: anxiety symptoms	122
Figure S2.3 Forest plot of comparison: resilience-focussed intervention versus alternate resilience-focussed intervention; all trials; short-term follow-up (≤ 12 months) subgroup analysis; outcomes: depressive symptoms and anxiety symptoms	122
Figure S2.4 Forest plot of comparison: resilience-focussed intervention versus alternate resilience-focussed intervention; all trials; long-term follow-up (> 12 months) subgroup analysis; outcomes: depressive symptoms and anxiety symptoms	123
Funnel plots for primary analysis of all studies, comparison: intervention versus control, by mental health outcome	124
Depressive symptoms	124
Anxiety symptoms	124
Hyperactivity	125
Conduct problems	125
Internalising problems	126
Externalising problems	126
General psychological distress	127

CHAPTER 5: IMPROVING ADOLESCENT MENTAL HEALTH AND RESILIENCE THROUGH A RESILIENCE-BASED INTERVENTION IN SCHOOLS: STUDY PROTOCOL FOR A RANDOMISED CONTROLLED TRIAL

Figure 1 Estimated CONSORT flow diagram for the schools' progress through the trial phases	133
--	-----

CHAPTER 6: EFFECTIVENESS OF A SCHOOL-BASED UNIVERSAL INTERVENTION TARGETING STUDENT RESILIENCE PROTECTIVE FACTORS IN REDUCING MENTAL HEALTH PROBLEMS IN ADOLESCENT

Figure 1 Study flow diagram	148
-----------------------------------	-----

LIST OF APPENDICES

Appendix 1: The University of Newcastle Thesis by Publication Guidelines	218
Appendix 2: Funding Sources for Chapters 2, 5 and 6	221
Appendix 2.1: Hunter Medical Research Institute and NiB Foundation Grant documentation	221
Appendix 2.2: National Health and Medical Research Council Grant documentation	223
Appendix 3: Ethics Approvals and Trial Registration for Chapters 2, 5 and 6	225
Appendix 3.1: Hunter New England Human Ethics Approval	225
Appendix 3.2: Hunter New England Human Ethics Approval Variation 2013	227
Appendix 3.3: University of Newcastle Ethics Approval	229
Appendix 3.4: University of Newcastle Ethics Approval Variation 2010	232
Appendix 3.5: University of Newcastle Ethics Approval Variation 2013	234
Appendix 3.6: Aboriginal Health & Medical Research Council Approval.....	237
Appendix 3.7: Aboriginal Health Impact Statement – Checklist	238
Appendix 3.8: Aboriginal Health and Medical Research Council (AH&MRC) Cultural Approval of manuscript prior to journal submission: Chapter 2.....	240
Appendix 3.9: Aboriginal Health and Medical Research Council (AH&MRC) Cultural Approval of manuscript prior to journal submission: Chapter 6.....	241
Appendix 3.10: Australian and New Zealand Clinical Trial (ANZCTR) registration	242
Appendix 4: Consent forms and information statements for Chapters 2, 5 and 6	250
Appendix 4.1: School Information Letter	250
Appendix 4.2: Student Information Statement Intervention and Control Schools ...	260
Appendix 4.3: Parent Information Statement for Baseline Data Collection 2011	263
Appendix 4.4: Parent Information Statement for Follow-up Data Collection 2014 .	268
Appendix 4.5: Student Parental Consent Form Intervention and Control Schools...	272
Appendix 4.6: School Consent Form Catholic Intervention and Control Schools ...	273

Appendix 5: Data Collection Tools for Chapters 2, 5 and 6.....	274
Appendix 5.1 Student survey	274
Appendix 5.2: School Environment Survey A: Aboriginal specific questions - AEO/ AEW / Aboriginal Education Co-ordinator.....	295
Appendix 5.3: School Environment Survey B: Deputy Principal.....	315
Appendix 5.4: School Environment Survey C: Head Teacher (HT) Welfare.....	327
Appendix 5.5: School Environment Survey D: Head Teacher of Key Learning Area (KLA)	351
Appendix 6: Additional materials to support Chapter 6	355
Appendix 6.1 Healthy Schools, Healthy Futures Program Guide.....	355
Appendix 6.2: Example of School Intervention Officer support	482
Appendix 6.3: Example Annual School Action Plan to address intervention strategies endorsed by the school executive	489
Appendix 6.4: Example of information provided to schools during establishment of HSHF School Intervention Teams	493
Appendix 6.5: Example information regarding student protective factors provided to parents via school newsletter – Goals and aspirations	494
Appendix 6.6: Example information regarding student protective factors provided to parents via school newsletter – Empathy	495
Appendix 6.7: Example strategy to increase parent involvement in school – Parent Communication Strategy: Information included in Newsletter	496
Appendix 6.8: Examples of Strategy Review Workshop Content, Handouts and Evaluation Form	497

**CHILD AND ADOLESCENT
MENTAL HEALTH:
RESILIENCE AS A POTENTIAL
APPROACH**

ABSTRACT

Mental health problems are estimated to affect 10-20% of children and adolescents worldwide, often continue into adult years, and contribute to considerable economic, social, and community burden. Prevention of mental health problems in children and adolescents has been identified as an international public health priority.

Comprehensive, population level prevalence data and effective interventions are necessary for the prevention of mental health problems in children and adolescents. This thesis addressed three related aims.

Population level data regarding the general mental health status and the socio-demographic factors associated with the mental health status of adolescents in Australia aged 12–16 years was limited at the time the studies were being planned. Aim one was to examine prevalence of four mental health problems and association with five socio-demographic characteristics in a regional sample of Australian adolescents (Chapter 2). Data on mental health outcomes measured by the Strengths and Difficulties Questionnaire (SDQ) was obtained from a survey of almost 7,000 Australian adolescents aged 12-16 years conducted in 2011 as baseline data collection for a cluster randomised controlled trial. The study region was characterised by a low index of socio-economic status and a high proportion of Aboriginal students relative to the state of New South Wales (NSW) and Australia overall. Key findings included: 19% of students with a Total SDQ score in the ‘very high’ range; a significant association of gender with all outcomes (total difficulties and internalising problems higher for girls and a significant interaction with age resulting in greatest mean difference between females and males at age 15, and externalising problems and prosocial behaviour problems higher for boys), and; no significant associations of either socio-economic status or geographic location of residence with any outcomes. Aboriginal students, who

composed 11% of the sample, scored higher for mental health problems across all four outcomes as compared to non-Aboriginal students.

Resilience - often referred to as the ability to maintain or return to a positive state of mental health by employing multiple internal or external protective factors - has been proposed as a potential approach for interventions to prevent or reduce mental health problems in children and adolescents. Universal interventions represent one approach to doing so that aligns with international objectives supporting mental health across all people and are commonly adopted within community-based settings (e.g. schools). Universal, school-based interventions that target the strengthening of protective factors central to the concept of resilience have been evaluated within many studies internationally. However, the evidence relating to such an approach had not been comprehensively quantitatively synthesised. Aim two was to quantitatively synthesise the international evidence-base for the effectiveness of universal, school-based, resilience-focussed interventions on mental health problems in children and adolescents (Chapters 3 and 4). A systematic review with meta-analysis was conducted, and included 57 trials of participants aged 5-18 years. Key findings, based on child and adolescent trials combined, indicated resilience-focussed interventions to be effective relative to a control in reducing four of seven mental health problem outcomes: depressive symptoms, internalising problems, externalising problems, and general psychological distress (but not anxiety symptoms, hyperactivity and conduct problems). Effects of intervention were found to vary by age, length of follow-up, and therapeutic basis (cognitive behavioural therapy [CBT]-based vs. non-CBT-based). Some methodological limitations of the included trials were noted.

The large majority of trials that have assessed the effect of universal, school-based, resilience-focussed interventions on mental health outcomes in children and

adolescents have measured intervention effect on internalising problems including anxiety and depression, with fewer trials measuring effect on externalising problems and total difficulties. Additionally, past trials have most commonly tested the effect of a manualised program delivered within the school curriculum, without the utilisation of broader capacity building opportunities provided by the school environment and in keeping with a Health Promoting Schools approach. Relatively few trials have adopted a pragmatic approach, providing flexibility for participants to select programs to implement which best meet their needs and arguably representing a test of an intervention under somewhat 'real world conditions'. Aim three was to develop and evaluate the effect of a pragmatic, universal, resilience-focussed intervention in secondary schools on total difficulties, internalising problems, externalising problems, and prosocial behaviour problems, and student internal and external protective factors (Chapters 5 and 6). A cluster randomised controlled trial was conducted in 32 secondary schools (20 intervention, 12 control), with data collected from students in Grade 7 at baseline (2011; n=3115), and Grade 10 at immediate post-intervention follow-up (2014, n=2149; enrolments in Grades 7 to 10 typically aged 12-16 years; 50% male; 69.0% retention). The intervention was implemented during Grades 8 to 10 (2012-2014) and consisted of a framework of sixteen broad intervention strategies targeting internal and external resilience protective factors across the three Health Promoting Schools domains. Schools were asked to implement sixteen broad intervention strategies however, in line with a pragmatic approach, schools were given the flexibility to select the specific programs or resources to do so, and the order and manner in which these were implemented within each intervention school varied. To assist schools to achieve this, a list of programs and curriculum resources targeting resilience protective factors and recommended to promote mental health in children and adolescents was provided.

Key findings included no significant intervention effect for four mental health outcomes measured utilising the SDQ (total difficulties, internalising problems, externalising problems, and prosocial behaviour problems), nor for internal and external protective factors measured utilising the Resilience and Youth Development Module of the California Healthy Kids Survey. A number of possible explanatory factors pertaining to the null results of the trial were considered, including: that the pragmatic approach may have resulted in inconsistent strategy implementation across intervention schools, and; process data suggesting that strategies for supporting positive mental health and resilience may similarly have been a focus in control schools due to contextual changes in policy and practice across the broader school system of NSW, Australia, during the time of the trial.

Supported by the research reported in this thesis, a number of needs for ongoing research were identified relating to: measurement and monitoring prevalence of mental health problems in children and adolescents; enhancing understanding of how resilience protective factors relate to mental health problems in children and adolescents, and; considerations for the conduct of future intervention trials.