

## EDUCATION

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### Doctor of Philosophy

Expected submission: March 2023

The University of Melbourne, Primary Supervisor: Prof. Katherine Lee

- Thesis: *Evaluation of approaches for handling missing data in complex epidemiological studies*

### Master of Biostatistics

2017–2018

The University of Melbourne, GPA: 3.75/4.00

- Master's Thesis 1: *A comparison of two measures to screen for mental health symptoms in pregnancy and early postpartum: The Matthey Generic Mood Questionnaire and Depression, Anxiety, Stress Scales short-form*
- Master's Thesis 2: *The relationship between maternal hair cortisol concentrations and self-reported mental health in the early postpartum years*

### Bachelor of Biomedical Science

2014–2016

La Trobe University, GPA: 3.83/4.00

- Double major in Statistics and Medical Science

## WORK EXPERIENCE

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### Melbourne School of Population and Global Health

Jul 2018–Current

#### The University of Melbourne

Causal Academic Tutor/Senior Tutor

- Delivered tutorial sessions and Stata practicals, and completed assessment marking for Masters-level subjects in the areas of biostatistics and statistical computing.
- Additional responsibilities as Senior Tutor included assisting the Lecturer during Q&A sessions and proofing assessments

### The 2000 Stories Project

Mar 2019–Mar 2020

#### Murdoch Children's Research Institute (MCRI)

Biostatistician

- Provided statistical consultation and conducted analysis for various projects using data from the Victorian Adolescent Health Cohort Study (*VAHCS*) and Victorian Intergenerational Health Cohort Study (*VIHCS*).

### Monash Addiction Research Centre

Oct 2018–Mar 2019

#### Monash University

Biostatistician

- Responsible for the statistical analysis within the centre. Prepared statistical analysis plans in consultation with content experts.

## TEACHING

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<b>Tutor/Senior Tutor</b> at The University of Melbourne Master of Public Health – <i>Biostatistics (POPH90013)</i> – <i>Regression methods in health research (POPH90144)</i> Master of Biostatistics – <i>Introduction to statistical computing (MAST90101)</i>	July 2018–Current
<b>Tutor</b> at Clinical Epidemiology and Biostatistics Unit, MCRI <i>Introduction to Biostatistics</i>	Mar 2021–Current
<b>Tutor</b> at Victorian Centre for Biostatistics (ViCBiostat) <i>ViCBiostat Summer School: Introduction to multiple imputation for missing data</i>	Feb 2021

## PUBLICATIONS

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- [1] D. Hutchinson, E. Spry, H. Mohamad Husin, **M. Middleton**, S. Hearps, M. Moreno-Betancur, E. Elliott, J. Ryan, C. Olsson, and G. Patton, “Longitudinal prediction of periconception alcohol use: A 20-year prospective cohort study across adolescence, young adulthood and pregnancy”, *Addiction*, vol. 117, no. 2, pp. 343–353, 2022.
- [2] **M. Middleton**, C. Nguyen, M. Moreno-Betancur, J. Carlin, and K. Lee, “Evaluation of multiple imputation approaches for handling missing covariate information in a case-cohort study with a binary outcome”, *BMC Medical Research Methodology*, vol. 22, no. 1, 2022.
- [3] H. Bryson, **M. Middleton**, H. Huque, F. Mensah, S. Goldfeld, and A. Price, “Examining longitudinal associations between self-reported depression, anxiety and stress symptoms and hair cortisol among mothers of young children”, *Journal of Affective Disorders*, vol. 282, pp. 921–929, 2021.
- [4] L. Hines, E. Spry, M. Moreno-Betancur, H. Mohamad Husin, D. Becker, **M. Middleton**, J. Craig, L. Doyle, C. Olsson, and G. Patton, “Cannabis and tobacco use prior to pregnancy and subsequent offspring birth outcomes: A 20-year intergenerational prospective cohort study”, *Scientific Reports*, vol. 11, no. 1, 2021.
- [5] D. Price, **M. Middleton**, A. Matthey, P. Goldfeld, P. Kemp, and M. Orsini, “A comparison of two measures to screen for mental health symptoms in pregnancy and early postpartum: The matthey generic mood questionnaire and the depression, anxiety, stress scales short-form”, *Journal of Affective Disorders*, vol. 281, pp. 824–833, 2021.
- [6] E. Spry, M. Moreno-Betancur, **M. Middleton**, L. Howard, S. Brown, E. Molyneaux, C. Greenwood, P. Letcher, J. MacDonald, K. Thomson, E. Biden, C. Olsson, and G. Patton, “Preventing postnatal depression: A causal mediation analysis of a 20-year preconception cohort”, *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 376, no. 1827, 2021.
- [7] T. Lam, L. Kuhn, J. Hayman, **M. Middleton**, J. Wilson, D. Scott, D. Lubman, K. Smith, and S. Nielsen, “Recent trends in heroin and pharmaceutical opioid-related harms in victoria, australia up to 2018”, *Addiction*, vol. 115, no. 2, pp. 261–269, 2020.
- [8] S. Nielsen, R. Crossin, **M. Middleton**, T. Lam, J. Wilson, D. Scott, C. Martin, K. Smith, and D. Lubman, “Comparing rates and characteristics of ambulance attendances related to extramedical use of pharmaceutical opioids in victoria, australia from 2013 to 2018”, *Addiction*, vol. 115, no. 6, pp. 1075–1087, 2020.

- [9] L. Picco, **M. Middleton**, R. Bruno, M. Kowalski, and S. Nielsen, “Validation of the owls, a screening tool for measuring prescription opioid use disorder in primary care”, *Pain Medicine (United States)*, vol. 21, no. 11, pp. 2757–2764, 2020.
- [10] L. Picco, **M. Middleton**, R. Bruno, M. Kowalski, and S. Nielsen, “Validity and reliability of the computer-administered routine opioid outcome monitoring (room) tool”, *Pain Medicine (United States)*, vol. 21, no. 12, pp. 3645–3654, 2020.
- [11] E. Spry, C. Wilson, **M. Middleton**, M. Moreno-Betancur, L. Doyle, L. Howard, A. Hannan, M. Wlodek, J. Cheong, L. Hines, C. Coffey, S. Brown, C. Olsson, and G. Patton, “Parental mental health before and during pregnancy and offspring birth outcomes: A 20-year preconception cohort of maternal and paternal exposure”, *EClinicalMedicine*, vol. 27, 2020.
- [12] K. Lai Joyce Chun, A. Olsen, M.-W. Taing, A. Clavarino, S. Hollingworth, R. Dwyer, **M. Middleton**, and S. Nielsen, “How prepared are pharmacists to provide over-the-counter naloxone? the role of previous education and new training opportunities”, *Research in Social and Administrative Pharmacy*, vol. 15, no. 8, pp. 1014–1020, 2019.
- [13] **M. Middleton** and S. Nielsen, “Changes in australian prescription opioid use following codeine rescheduling: A retrospective study using pharmaceutical benefits data”, *International Journal of Drug Policy*, vol. 74, pp. 170–173, 2019.
- [14] S. Nielsen, R. Crossin, **M. Middleton**, C. Martin, J. Wilson, T. Lam, D. Scott, K. Smith, and D. Lubman, “Comparing rates and characteristics of ambulance attendances related to extramedical use of pharmaceutical opioids in australia: A protocol for a retrospective observational study”, *BMJ Open*, vol. 9, no. 5, 2019.

## PRESENTATIONS

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- International Society for Clinical Biostatisticians, Newcastle, UK 2022  
*Evaluation of multiple imputation approaches for case-cohort studies with binary outcomes* *Accepted Oral*
- World Congress of Epidemiology, Melbourne, Australia (*virtual*) 2021  
*Multiple imputation in the context of case-cohort studies: simulation and case study* *On-demand Oral*
- International Society for Clinical Biostatisticians, Lyon, France (*virtual*) 2021  
*Multiple imputation in the context of case-cohort studies: simulation and case study* *Oral*
- Australian and New Zealand Statistical Conference, Gold Coast, Australia (*virtual*) 2021  
*Multiple imputation in the context of unequal sampling probabilities with case-cohort studies: a simulation and case study* *Oral*
- Australian Mathematical Sciences Institute Connect, Melbourne, Australia 2017  
*Statistical Challenges and Approaches in Analysis of Small-RNA Sequencing Data* *Oral*

## SCHOLARSHIPS AND AWARDS

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- NHMRC postgraduate scholarship (APP1190921) 2020–2023  
*\$80,097.33*
- Leaders in Communities Award 2018
- AMSI vacation research scholarship 2016–2017  
*\$2,700.00*

- La Trobe student cadetship 2015–2016  
\$3,840.00
- Advanced biochemistry and medical biology internship 2015

## PROFESSIONAL ACCREDITATION AND MEMBERSHIP

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### Accreditation

- Graduate Statistician, *Statistical Society of Australia* 2022–Current

### Memberships

- The Australasian Epidemiology Association 2020–Current
- The International Society for Clinical Biostatistics 2018–Current
- Statistical Society of Australia 2016–Current

## EXTRACURRICULAR AND VOLUNTEERING ACTIVITIES

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- Peer reviewer 2022  
*BMC Medical Research Methodology*
- Statistical Society of Australia 2021–Current  
*Victorian Branch Councillor –Early Career and Student Statisticians Representative*  
*Victorian Branch Strategy Committee member*  
*Early Career and Student Statisticians Conference 2021 Organising Committee - Social Events Manager*
- Melbourne University Health Initiative 2017  
*Events Officer*
- In2Science Peer Mentor 2015–2017

## REFERENCES

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Available upon request