

**GENDER DIFFERENCES IN DEPRESSION AND ANXIETY ACROSS  
THE ADULT LIFESPAN**

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## **STATEMENT OF THE CANDIDATE’S CONTRIBUTION TO THE RESEARCH**

Research for this thesis was undertaken using data from the first and second waves of the Personality and Total Health (PATH) Through Life Project. This large, community project was designed and implemented by the Centre for Mental Health Research (CMHR).

The candidate independently analysed all data and drafted all chapters for this thesis. Chapters were then circulated for review amongst the candidate’s supervisors. Professor Helen Christensen provided feedback on all chapters. In addition, Professor Andrew Mackinnon provided comments for Chapters 1, 2, 3, 5, 6, 7 and 8, as well as guidance on the statistical plan for the thesis. Dr Peter Butterworth provided feedback on Chapters 1, 2, 3 and 7. Dr Tim Windsor also gave feedback on an early version of Chapter 7 – when it was in the form of a manuscript to be submitted for publication.

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## LIST OF ABBREVIATIONS

### GENERAL

ABS	Australian Bureau of Statistics
APA	American Psychological Association
AUDIT	Alcohol Use Disorders Identifications Test
BAS	Behavioural Activation Scale
BIS	Behavioural Inhibition Scale
CSA	Childhood Sexual Abuse
CES-D	Centre for Epidemiological Studies Depression Scale
CIDI	Composite International Diagnostic Interview
CMHR	Centre for Mental Health Research
BDI	Beck Depression Inventory
DSM	Diagnostic and Statistical Manual of Psychiatric Disorders
EPQ	Eysenck Personality Questionnaire
GAD	Generalised Anxiety Disorder
HADS	Hospital Anxiety and Depression Scales
HPA	Hypothalamic-pituitary-adrenal (axis)
HPT	Hypothalamic-pituitary-thyroid (axis)
HRT	Hormone replacement therapy
NHMRC	National Medical Health and Research Council
NIMH	The National Institute of Mental Health
OCD	Obsessive Compulsive Disorder
OD	Overanxious Disorder
PMDD	Premenstrual Dysphoric Disorder
PPD	Post-Partum Depression
PTSD	Post-traumatic Stress Disorder
SF-12	Short Form Health Survey (12-item)
STPI	State-Trait Personality Inventory
STW	Spot-the-Word Test

### DATASETS/SURVEYS

ECA	Epidemiological Catchment Area Study (US)
NSMHWB	National Survey of Mental Health and Well-Being (Australia)
NCS	The National Comorbidity Survey (US)
PATH	Personality and Total Health Survey/Project (Canberra, Australia)

### STATISTICAL

CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
DF	Degrees of Freedom
DIF	Differential Item Functioning

EM	Expectation-maximisation
IRT	Item Response Theory
MAR	Missing at random
Mediator <sup>p</sup>	Potential Mediator
Moderator <sup>p</sup>	Potential Moderator
MGA	Multiple Group Analyses
MVA	Multivariate Analyses
N	Number of participants
OLS	Ordinary Least Squares
RMSEA	Root Mean Square Error of Approximation
SD	Standard Deviation
SPSS	Statistical Package for the Social Sciences
TLI	Tucker Lewis Index

## THESIS ABSTRACT

Women are on average twice as likely as men to experience depression and anxiety disorders. Several explanations have been proposed to explain these gender disparities. However, few studies have examined the possibility that the gender difference in depression and anxiety prevalence, and the explanatory factors involved, vary across the life course. This thesis describes the pattern of distribution for gender differences in depression and anxiety levels across the adult lifespan, and evaluates the role of potential psychosocial risk factors at particular life stages. Analyses were undertaken using the first and second waves of the Personality and Total Health (PATH) Through Life study. This study collects data on three narrow-aged cohorts living in the Canberra and Queanbeyan region (Australia) every four years. At Wave 1, participants were aged 20-24, 40-44 and 60-64. The outcome measures used in this thesis were the Goldberg Depression and Anxiety Scales.

Across the three PATH cohorts, women experienced higher levels of depression and anxiety than did men. However differences were most prominent in the youngest age group. Latent variable modelling showed that for each age group, the gender difference in levels of depression and anxiety could not be attributed to gender-biased items. Two pathways to the gender disparity in depression and anxiety levels were explored. First, multivariate mediation analyses identified gender differences in exposure to potential psychosocial risk factors. Second, Ordinary Least Squares (OLS) regression identified gender differences in vulnerability or susceptibility to potential psychosocial risk factors. Women of all age groups were more exposed than men to childhood adversity, low mastery, high behavioural inhibition, rumination, neuroticism, poor health and interpersonal problems, factors that were associated with greater depression and anxiety.

They were also more vulnerable than men to depression and anxiety if they had experienced negative events involving social networks or were recently married, or if they had poor cognitive function or low mastery. Age comparisons suggested that stress in domestic relationships and responsibilities were particular vulnerabilities for young women, and that middle aged women were specifically susceptible to poor social support and behavioural inhibition. No specific vulnerabilities emerged for older women.

While the focus of this thesis was identifying potential risk factors that might explain the preponderance of symptoms for women, the analysis techniques adopted also provided information on potential risk factors relevant to men. The findings showed that men were more exposed to employment problems than women, and were more vulnerable to alcohol abstinence, aggression and problems at work. For young men, unemployment was a particular vulnerability, as were domestic responsibilities for middle aged men, and poor health and low family support for older men. Overall, the potential psychosocial risk factors identified for depression were similar to those identified for anxiety.

This thesis confirms that a lifespan perspective is important when describing gender differences in depression and anxiety, and identifying associated risk factors. It also demonstrates that the roles played by potential risk factors, can be investigated effectively using the frameworks of exposure and vulnerability. Information regarding levels of depression and anxiety amongst subgroups such as gender and age group, as well as the risk factors most relevant to these subgroups, is important for understanding the development of anxiety and depression, and in framing potential prevention interventions.