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INCIDENCE AND NEUROPSYCHOLOGICAL CONSEQUENCES OF MILD TRAUMATIC BRAIN INJURY IN OLDER ADULTS

A thesis presented in partial fulfilment of the requirements for the degree of Master of Arts in Psychology at Massey University

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To my grandmother, Dorothy, who inspired my endeavours in the field of Neuropsychology
ABSTRACT

This study examined the epidemiology and neuropsychological effects of Mild Traumatic Brain Injury (MTBI) in older adults (with a mean age of 83). The study was conducted in two parts. Part one involved the administration of a questionnaire to 264 residents from nursing homes and retirement villages. Results indicated that 41.9% of nursing home and 26.5% of retirement village residents reported they had sustained a fall during the past year. Of these falls, 2.3% met criteria for a TBI. Of the retirement village participants, 4.1% indicated they had sustained a head injury during the past five years which met the criteria for a MTBI, equating to an annual incidence rate of 816 per 100,000. Analysis of incidence rate by age revealed TBIs increased with age; older adults aged 84 and under were less likely to have sustained a TBI (2.2%) than those aged 85 and over (4%). Of those who had sustained a TBI, 92.5% were of mild severity, and, of these between 10.8% and 16% had not sought any medical attention. Participants admitted to hospital for orthopaedic injuries were less likely to be diagnosed with a MTBI (18.1%) than those with non-orthopaedic injuries (40%).

Part two involved the administration of measures of attention, memory and executive functioning to 21 MTBI participants. Compared with age matched controls, the MTBI group performed significantly lower on measures of attention. Analysis of the MTBI group according to severity of non-brain injury/s indicated significant differences on measures of memory (visual) and information processing speed. Post hoc analysis within the MTBI group according to fall frequency revealed significant differences on measures of information processing speed, attention and memory (verbal and visual). Further analysis revealed only fall frequency, age, gender and an interaction effect between fall frequency and age predicted neuropsychological performance. The reported findings suggest that the variables of fall frequency and age be taken into consideration when evaluating outcome post MTBI in older old adults.
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# Table of Contents

Abstract .......................................................................................................................... v
Acknowledgements .......................................................................................................... vii
Table of Contents ........................................................................................................... ix
List of Tables .................................................................................................................... xiii
List of Figures .................................................................................................................. xvii
List of Appendices .......................................................................................................... xix

## Chapter 1: Overview

## Chapter 2: Epidemiology, Classification and Neurophysiology of Traumatic Brain Injury

- Definition of Traumatic Brain Injury ................................................................. 5
- Incidence ..................................................................................................................... 6
- Aetiology .................................................................................................................... 10
  - Cause of injury .................................................................................................... 10
  - Mortality ............................................................................................................ 10
  - Gender ............................................................................................................... 11
  - Ethnicity .......................................................................................................... 11
  - Socioeconomic Status ..................................................................................... 11
- Severity of Injury .................................................................................................... 12
- Classifications of TBI ............................................................................................ 12
  - Severity ............................................................................................................ 12
    - Loss of consciousness / Alteration in consciousness .................................. 12
    - Glasgow Coma Scale .................................................................................. 13
    - Post-Traumatic Amnesia (PTA) ................................................................ 13
    - Distribution .................................................................................................. 14
  - Neurophysiology: Primary/Secondary .............................................................. 15
    - Primary Injury ............................................................................................... 16
    - Contusion ....................................................................................................... 16
    - Diffuse Axonal Injury .................................................................................. 17
    - Secondary Injury .......................................................................................... 18
    - Hemorrhage/Hematomas ............................................................................. 18
    - Ischemia ......................................................................................................... 18
    - Cerebral Edema ............................................................................................. 18
    - Increased Intracranial Pressure ................................................................... 18
    - Hydrocephalus .............................................................................................. 19
    - Infection ......................................................................................................... 19
    - Ventricular Enlargement .............................................................................. 19
    - Open/Closed .................................................................................................. 19
    - Focal/Diffuse ................................................................................................. 19
  - Multiple Traumatic Brain Injuries ..................................................................... 20
  - Summary ............................................................................................................. 20
CHAPTER 6: METHOD ................................................................. 55
Research Setting .................................................................. 55
Ethical Issues .................................................................. 55
Informed Consent ................................................................ 55
Confidentiality .................................................................. 56
Other Issues ..................................................................... 56
Part One: Administration of Questionnaire ..................... 56
Participants ..................................................................... 56
Measure ......................................................................... 57
Procedure ....................................................................... 59
Part Two: Administration of Neuropsychological Measures ........................................................................... 60
Participants ..................................................................... 60
Measures ......................................................................... 63
Procedure ....................................................................... 66

CHAPTER 7: RESULTS ............................................................... 67
Part One: Epidemiology / Aetiology .................................. 67
Hypothesis One: Fall Incidence Rates ............................... 67
Hypothesis Two: Proportion of falls resulting in TBI ............ 69
Hypothesis Three: MTBI Incidence Rate ......................... 69
Hypothesis Four: Increasing Incidence Rates .................... 70
Hypothesis Five: Severity of TBI ...................................... 71
Hypothesis Six: Seeking of Medical Attention ................. 71
Hypothesis Seven: Diagnosis of Orthopaedic versus Non-Orthopaedic Injuries .................................................. 71
Hypothesis Eight: Post-Concussive Symptoms .................. 72
Part Two: Neuropsychological Measures ......................... 73
Hypothesis Nine: MTBI versus Controls ........................... 74
Hypothesis Ten: MTBI Group - Multiple TBIs .................. 75
Hypothesis Eleven: MTBI Group - Severity of Non-Brain Injury ................................................................. 76
Hypothesis Twelve: Normative Data ................................. 77
Hypothesis Thirteen: Patient Competency Rating Scale .... 81
Post Hoc Results ................................................................ 83
Diagnosis of Orthopaedic / Non-Orthopaedic Injury of Participants
Reporting Post-Concussive Symptoms ............................... 83
MTBI Group - Fall Frequency ........................................ 83
MTBI Group - Predictive ability of Fall Frequency / Severity of Non-Brain Injury / Time since Injury on Neuropsychological Performance .................................................. 85
Comparison of MTBI Group according to Fall Frequency on the PGRS ...................................................... 90
Revised Trail Making Test .................................................. 91
Normative Data .............................................................. 91

CHAPTER 8: DISCUSSION ......................................................... 93
Part One: Epidemiology / Aetiology ................................. 93
Fall Incidence Rates ......................................................... 93
MTBI Incidence Rate ........................................................ 93
Severity of TBI ............................................................. 94
Seeking of Medical Attention ................................................................. 94
Diagnosis of Orthopaedic versus non-Orthopaedic Injuries ......................... 95
Post-Concussive Symptoms ........................................................................ 95
Part Two: Neuropsychological Measures .................................................... 96
Normative Data ......................................................................................... 98
Patient Competency Rating Scale ............................................................. 99
Suggestions for Future Research ............................................................... 99
Limitations ............................................................................................... 100
Summary and Conclusions ....................................................................... 101

REFERENCES .......................................................................................... 103
LIST OF TABLES

Table 2.1
Traumatic Brain Injury Incidence Figures from Studies including Older Adults .................. 7

Table 2.2
Classification System for Measuring Severity of Traumatic Brain Injury ....................... 14

Table 3.1
Literature Documenting the Rapid Recovery of Neuropsychological Functioning .............. 31

Table 3.2
Literature Documenting the Long Term Recovery of Neuropsychological Functioning ............. 33

Table 4.1
Literature Documenting Neuropsychological Recovery in Older Adults .......................... 38

Table 4.2
Number (and percent) of Brain Injuries by Fracture Status and Anatomic Location ............. 41

Table 4.3
Evidence for a More Negative Neuropsychological Outcome for Older Adults Following TBI .................. 43

Table 4.4
Evidence that Neuropsychological Deficits Following TBI in Older Adults are Comparable to that of Younger Adults Following TBI ................................................................. 44

Table 6.1
Demographic Analysis of Participants Participating in Part One of the Study .................... 57
Table 6.2
International Classification of Diseases Accidental Falls Coding Criteria ..................................... 60

Table 6.3
Demographic Analysis of Participants Participating in Part Two of the Study .................................. 62

Table 7.1
MTBI Incidence Rates by Age Category .......................................................................................... 70

Table 7.2
Levels of MTBI .................................................................................................................................. 71

Table 7.3
Comparison on Neuropsychological Measures between MTBI Group and Controls .................. 75

Table 7.4
Comparison of MTBI Group on Neuropsychological Measures According to Severity of Non-Brain Injury/s ................................................................................................................. 77

Table 7.5
Comparison of Means between the Present Study and Normative Data on Visual Reproduction, COAST & Digit Symbol Coding .................................................................................................. 78

Table 7.6
Comparison of Means between the Present Study and Normative Data on the Trail Making Test (a) ......................................................................................................................................... 79

Table 7.7
Comparison of Means Between the Present Study and Normative Data on the AVLT (a) ............... 80

Table 7.8
Comparison on PCRS Between MTBI Group and Controls ................................................................ 82
Table 7.9
Comparison of MTBI Group on Neuropsychological Measures According to Fall Frequency
......................................................................................................................................................... 85

Table 7.10
MTBI Group – Predictive ability of Fall Frequency / Severity of Non-Brain Injury / Time since Injury on Neuropsychological Performance .................................................................................. 87

Table 7.11
Comparison of MTBI Group according to Fall Frequency on the PCRS ........................................... 90

Table 7.12
Comparison of MTBI and Control Groups on the Trail Making Test – Part B ................................. 91

Table 7.13
Comparison of Means between Retirement Village and Nursing Home Participants on Visual Reproduction I & II and Digit Symbol Coding ................................................................. 92
LIST OF FIGURES

**Figure 7.1.** Proportion of nursing home and retirement village participants sustaining a fall during the last year............................................................... 67

**Figure 7.2.** Fall(s) sustained by participants according to frequency .................. 68

**Figure 7.3.** Fall(s) sustained by participants according to cause of injury ............ 68

**Figure 7.4.** Type of injury sustained following a fall(s)...................................... 69

**Figure 7.5.** Diagnosis of hospitalised orthopaedic and non-orthopaedic injuries ..... 72

**Figure 7.6.** Diagnosis of hospitalised orthopaedic and non-orthopaedic injuries reporting post-concussive symptoms.................................................. 83
LIST OF APPENDICES

Appendix I  Information Sheets and Consent Forms ............................................. 117
Appendix II  Fall Questionnaire ........................................................................... 133
Appendix III Administration Instructions for Questionnaire ............................... 141
Appendix IV  Neuropsychological Measures ....................................................... 143
Appendix V  Administration Instructions for Neuropsychological Measures .......... 163
Appendix VI  Research Data Sheet ......................................................................... 171
Appendix VII Comparison of Post-Concussive Symptoms between MTBI Group and Controls ........................................................................................................... 179
Appendix VIII Assessment of Data for Violation of Multiple Regression Assumptions ................................................................................................................. 181