

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Neuropsychological Assessment of Refugee Survivors of War and Torture

A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Clinical Psychology
at Massey University, Wellington, New Zealand

Bahrie Veliu

2013



MASSEY UNIVERSITY
GRADUATE RESEARCH SCHOOL

Declaration Confirming Content of Digital Version of Thesis

I confirm that the content of the digital version of this thesis

Title: Neuropsychological Assessment of Refugees Survivors of War and Torture

is the final amended version following the examination process and is identical to this hard bound paper copy.

Have you included published articles/material from your thesis? Yes No

If yes, have you received copyright permission from the copyright holder (usually the publisher) to include this material with your thesis? Yes No

Student's Name: Bahrie Veliu

Student's Signature:

Date: 08/01/2014

**Neuropsychological Assessment of Refugee
Survivors of War and Torture**

A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Clinical Psychology
at Massey University, Wellington, New Zealand

Bahrie Veliu

2013

Abstract

This thesis presents the results of psychological and neuropsychological assessment of a group of refugees with PTSD and a group of refugees with co-morbid TBI and PTSD. The study was designed to evaluate the outcome related to co-morbid TBI+PTSD, compared to the outcome of PTSD alone. In addition, this study also evaluated the methodological barriers in neuropsychological assessment of refugees. Eighteen refugees diagnosed with PTSD and depression participated in the study. Seven of them reported head injuries that had led to loss of consciousness, and were assigned to the TBI+PTSD group with the remaining eleven in the PTSD only group.

Results indicated that neuropsychological assessment of refugees is challenging due to linguistic and cross-cultural barriers. Despite the adjustment of assessment according to suggestions from the literature, most refugees had difficulty doing the assessment, and for a small number assessment with the measures used in this study proved impossible. Non-parametric tests and boxplots were used to evaluate the differences between the TBI+PTSD group and the PTSD Only group in terms of psychological symptoms, self-reported functioning, and neuropsychological outcome. While no significant result was detected, possibly due to small sample size and high variability within the sample, the box plots revealed a number of tendencies that were consistent with the study's hypotheses.

Acknowledgements

This thesis is the end of a long journey that has been challenging, stimulating and forever memorable. Foremost, I would like to express my gratitude to the people who participated in this research. Their willingness to participate despite their experiences was truly inspirational.

Words are short to describe my gratitude to my supervisor Janet Leathem for trusting me to do this project in the first place and for being an amazing supervisor throughout this research. She was encouraging, patient and created an environment that allowed me to grow and learn. I would also like to thank my second supervisor Nigel Long for his contribution to this research.

It is difficult to overstate my gratitude to the staff at the Refugees as Survivors Centre in Wellington. They have helped this project throughout all its stages and in so many different ways that without them this project would not have been possible.

I thank all my fellow labmates in the Cherubs lab for stimulating discussions and all the fun we had over these years. A special thanks to my friend, Fernanda Mottin, who has been a loyal companion throughout this time, and who has provided support and stimulating conversations that have helped many ideas emerge.

Last but not least, a special thanks to my family. Without your patience, perseverance, and sacrifice this would not have happened. My love and gratitude goes, especially, to you all!

Table of Contents

Abstract	i
Acknowledgements.....	ii
List of Figures	viii
List of Tables	ix
Introduction and Overview.....	1
Literature Review and Consultations.....	1
Initial Research Project.....	2
Ethics Approval	3
Application for Funding.....	4
Data Collection	4
Revised Methodology	5
Chapter 1: Neuropsychological Sequelae	7
Neuropsychological Sequelae of PTSD.....	7
Definition and Prevalence of PTSD.....	7
The Nature of Cognitive Impairment in PTSD.....	8
Causes of Cognitive Deficit in PTSD	11
The Role of Co-morbidity in Neuropsychological Outcomes of PTSD	12
Summary and Conclusions	14
Traumatic Brain Injury	14
Definition.....	14
Classification of TBI Severity	15
Outcomes Following MTBI.....	16
Persistent Post-Concussion Symptoms Following MBTI	16

Outcomes of Moderate to Severe TBI	18
Co-Morbid TBI and PTSD.....	23
The Nature of Co-occurrence.....	23
Assessment Issues.....	24
Neuropsychological Outcome of Co-Morbid TBI and PTSD	25
Summary	26
Chapter 2: Neuropsychological Sequelae in Refugee Population.....	28
Traumatic Brain Injuries in Refugees	28
Forms of Head Injuries in Refugees	29
Blunt Trauma and Penetrating Injuries	30
Asphyxiation	31
Electrical Injuries	32
Malnourishment	33
Cognitive and Emotional Sequelae of Head Injury in Refugees	34
Neuropsychological Sequelae of PTSD in Refugees.....	35
Methodological Issues	36
Outcome.....	37
Summary	39
Chapter 3: Cross-cultural Neuropsychological Assessment	40
Theories of Cross-cultural Neuropsychological Assessment	42
Education as an Underlying Factor in Cross-cultural Biases.....	42
Van Der Vijver’s Cross-cultural Biases.....	43
Greenfield’s Theory of Cross-cultural Biases.....	43
Ardila’s Theory of Culturally Reinforced Skills	45
Language as a Factor Underlying Cross-cultural Differences	46

Test Translation46

Interpreter-Assisted Neuropsychological Assessment.....46

Chapter 4: The Current Study49

Chapter 5: Method.....51

Participants.....51

 The Inclusion Criteria51

 Characteristics of the Sample.....53

 Language.....54

Measures55

 Psychological Assessment55

 TBI Assessment55

 Neuropsychological Measures56

Procedure57

 Test Administration57

 Setting58

Ethics.....59

Chapter 6: Results.....62

Data Analysis Method.....62

 Approach to Qualitative Analysis.....62

 Approach to Quantitative Analysis.....63

Results I: Methodological and Cross-cultural Barriers.....63

 Preparation and Test Administration64

 Scoring and Interpreting67

 Reports on Specific Measures.....69

 Ecological Validity of Test Results72

Results II: Differences between PTSD and TBI+PTSD Groups	74
Characteristics of the Sample.....	74
Trauma Exposure	77
Psychological Symptoms	78
Self-reported Functioning	78
Neuropsychological Test Results.....	79
Results III: Clinical Issues in Neuropsychological Assessment of Refugees.....	80
Diagnosis of TBI.....	81
Determining the Relative Impact of PTSD and TBI.....	86
Individuals with More Subtle Cognitive Deficits	94
Determine Pre-morbid and Current Cognitive Abilities.....	99
Chapter 7: Discussion	103
Methodological Barriers	104
Refugees with PTSD Compared to Refugees with TBI+PTSD	108
Clinical Issues in Neuropsychological Assessment of Refugees.....	109
Diagnosing TBI and Differentiating from PTSD.....	110
Determining Refugees' Current and Pre-morbid Cognitive Functioning.....	111
Implications.....	111
Contribution of the Current Study	112
Limitations of the Current Research and Recommendations for Future Studies...	113
Conclusion	114
References.....	116
Appendices.....	135
Appendix A: Ethics Approval.....	135
Appendix B: Information Sheet - English	136

Appendix C: Information Sheet - Arabic.....	138
Appendix D: Information Sheet - Burmese	140
Appendix E: Consent Form - English.....	142
Appendix F: Consent Form - Arabic	143
Appendix G: Consent Form - Burmese	144
Appendix H: Locality Assessment.....	145
Appendix I: Health Research Council, NZ - Funding Application	148
Appendix J: Cultural Advisors.....	180
Appendix K: Poster for Control Group.....	186
Appendix L: Background Information Questionnaire - English.....	187
Appendix M: Background Information Questionnaire - Arabic.....	189
Appendix N: Background Information Questionnaire - Burmese	191
Appendix O: Patient Competency Rating Scale - English.....	194
Appendix P: Patient Competency Rating Scale - Arabic.....	197
Appendix Q: DASS - English.....	199
Appendix R: DASS - Arabic.....	201
Appendix S: DASS - Burmese.....	203

List of Figures

Figure 1.	Box plots comparing TBI+PTSD group and PTSD only group	76
Figure 2.	Percentage of tortured participants in TBI+PTSD group and PTSD only group who reported experiencing beating to the head, electrocution, starvation, sleep deprivation and asphyxiation	77
Figure 3.	Scaled scores of cognitive test P3	98
Figure 4.	Scaled scores of cognitive test P4	98
Figure 5.	Scaled scores of cognitive test P6	98
Figure 6.	Scaled scores of cognitive test P7	98

List of Tables

Table 1.	Estimates of Severity of Injury Based on Posttraumatic Amnesia (PTA) and Glasgow Coma Scale (GCS).Classification of TBI Severity.....	15
Table 2.	Summary of Studies with Refugees with PTSD	38
Table 3.	Demographic Characteristics of the Sample	52
Table 4.	Neuropsychological Measures	56
Table 5.	Overall Scores for PCRS Reports for Four Participants	68
Table 6.	Demographic and Clinical Characteristics of TBI+PTSD Group and PTSD Only Group	75
Table 7.	Self-reported Functioning in Activities of Daily Living (ADL), Emotional, Interpersonal, Cognitive, and Overall PCRS, Patient Competency Rating Scale.....	78
Table 8.	Mean, Median and SD and Differences in Scaled Scores of Cognitive Measures for PTSD Group and PTSD+TBI Group	79
Table 9.	The Characteristics of Participants and Head Injuries	84
Table 10.	The Circumstances and the Mechanism of Head Injury	85
Table 11.	Current Cognitive and Psychological Symptoms	95
Table 12.	Pre-injury and Current Self-reported Functioning.....	100