

Development of the “Insight Interview”: A New Tool Assessing Longitudinal Change in Awareness Deficits following Traumatic Brain Injury

Tania Malouf

Bachelor of Speech and Hearing Sciences

Bachelor of Science - Psychology (Honours)

A thesis submitted for fulfilment of the requirements for the degree of

Combined Doctor of Philosophy / Masters in Clinical Neuropsychology

Department of Cognitive Science, Faculty of Human Sciences

Macquarie University

October, 2012

Table of Contents

Title	i
Table of Contents	ii
Abstract	iii
Statement of Authentication and Ethical Accordance	v
Acknowledgements	vi
Chapter 1: General Introduction: Awareness Deficits following Traumatic Brain Injury	1
Chapter 2: The Insight Interview: Introducing a New Tool for Measuring Deficits in Awareness after Traumatic Brain Injury	27
Chapter 3: Reliability and Validity of the “Insight Interview”	103
Chapter 4: Neuropsychological Correlates of Awareness Deficits following Traumatic Brain Injury	143
Chapter 5: A Longitudinal Study of Awareness Deficits	207
Chapter 6: Summary and Conclusions	267

General Abstract

Awareness deficits are frequently observed in patients following a traumatic brain injury (TBI) and have been identified as one of the main factors in determining patients' functional and vocational outcomes. However, there is still relatively little known about the nature of awareness deficits in the early stages (< three months post-injury) following TBI, and even less is understood about the temporal profile of recovering awareness in people following TBI. This thesis investigates the longitudinal progression of awareness deficits and the neuropsychological factors which associate with the disorder and potentially predicts its persistence. Chapter 1 provides a general introduction by reviewing the current theoretical models with respect to causes as well as the nature and structure of different awareness deficits, and briefly discusses treatment approaches. Chapter 2 furthers the literature review with respect to measurement of awareness deficits and describes the development of a new tool, "The Insight Interview", designed to measure deficits across different domains of awareness (i.e., awareness of change, severity of impairments, current functional consequences and future functional consequences) over time and using both discrepancy "difference score" methods and interviewer-based ratings. Patients were found to demonstrate awareness deficits across all domains assessed, with the exception of the domain of awareness of current functional consequences. Chapter 3 examines the validity and reliability of the Insight Interview, both of which were found to be acceptable. Chapter 4 reports a study of the neuropsychological variables that may be predictive of awareness deficits in both the early stages (< three months post-injury) and 12 months later. The neuropsychological variables of memory, executive functioning and emotion recognition were all found to be associated with awareness deficits, however, patterns differed depending on both the domain of awareness being assessed and the time at which awareness was measured.

Patients' stress levels at baseline were also found to be inversely related to awareness at 12 months. Chapter 5 presents data from a 12 month longitudinal study using the Insight Interview to investigate the monthly temporal profile of awareness deficits from baseline to 12 months follow-up. Findings indicate that while patients appear to show increased awareness over time with regard to the concordance between their self-ratings of their abilities and a family informant's ratings of the patient's ability, this effect is driven by an increase in the family informant ratings of the patients' abilities. In contrast, the patients show no change in their self-ratings of their abilities over time. Chapter 6 is the concluding chapter of the thesis and summarises the major findings of the main chapters and discusses the theoretical and clinical implications for understanding of awareness deficits.

Statement of Candidate

This thesis is submitted to Macquarie University in fulfilment of the requirements for the degree of Combined Doctor of Philosophy / Masters in Clinical Neuropsychology.

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

The research presented in this thesis was approved by the Macquarie University Human Ethics Committee (Reference Number: HE26AUG2005-D04255), the Royal Rehabilitation Centre, Sydney Human Ethics Research Committee (Reference Number: 06/01) and the Sydney South West Area Health Service Human Research Ethics Committee (Project Number: 2006/138).

Signed:

—

Tania Malouf

Student No. 30596904

October, 2012

Acknowledgements

First and foremost, I would like to thank my supervisor, Associate Professor Robyn Langdon. Throughout this journey you have always provided me with support, encouragement and friendship. Without your consistent supervision, guidance and feedback, this thesis would not have been possible. Thank you also for your understanding and support through the personal struggles I encountered throughout this journey. It has been a pleasure and a privilege to work with you over the last 6 years.

Additionally, to my associate supervisor, Dr Alan Taylor, I am especially thankful for your guidance through the minefield of statistics that this thesis presented. Thank you for your patience as I struggled to learn new statistical concepts - I certainly now know more about SPSS than I ever imagined possible!

To Dr Jennifer Bachelor, thank you for your feedback on the neuropsychological aspects of this thesis.

I would also like to extend my gratitude to all the staff at the Royal Rehabilitation Centre, Sydney and the Brain Injury Rehabilitation Unit at Liverpool Hospital for supporting this project from its infancy. Particular thanks must go to Mr Matthew Conroy, Ms Jane McAuliffe, Dr Kasey Metcalf and Dr Mark Sabaz for taking the time to recruit eligible patients and fill out the clinician questionnaires. A big thank you must also be extended to all the patients and their family and friends who participated in this research. Thank you for your generosity of time, without you all this thesis would not have become a reality. I wish you and your families all the best for the future.

Thanks must also be extended to the support staff in the Departments of Cognitive Science and Psychology, with particular thanks going to Lesley McKnight, Janna Enger, Marcus Ockenden, Katie Webb, Chandera Rajah and Craig Richardson. Your roles are often overlooked in the thesis process, but your help with both the practical and paperwork aspects of this thesis was invaluable.

Finally, a big thank you must be extended to all my family and friends who supported me generously with their love, patience and time throughout this journey. Firstly, to my wonderful mother, Nancie Schuetzmann, thank you for your endless support and encouragement over the years, not only during this thesis but throughout all my university studies. Thank you also for the hours you spent reading and editing this thesis.

Thanks must also be extended to my brother, Carl Malouf, whose mathematical knowledge and advice and Microsoft Excel skills were a tremendous help in the early stages of this project.

To my good friends, Deborah Arguedas, Vivienne Au and Rebecca Wright, thank you for the endless hours you spent listening and supporting me. I could not have done it without you all and your love and support helped me through to the end. Deborah, it was an absolute pleasure to go through this postgraduate journey with you as both a colleague and a friend. I'm glad we never have to repeat this!

Finally to my beloved Andrew, I am sure you had no idea what you signed up for when I said the word "PhD". But thank you for consistently giving me the gift of time. You might have only ridden the end of the PhD wave with me, but that was the toughest part, thank you.

