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**INDICATORS AND PREDICTORS OF RETURN TO WORK OR EDUCATION
FOLLOWING TRAUMATIC BRAIN INJURY**

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ABSTRACT

The leading cause of brain damage in previously healthy young adults, many of whom are of working age, is traumatic brain injury (TBI). Research to date generally agrees that TBI can lead to unemployment. However, knowledge about the determinants of return to work following TBI in the New Zealand context is minimal. This is remarkable given that failure to return to work following TBI is associated with tremendous costs. These include economic implications such as contribution to the economy through work Vs the necessity of financial support through government and community funding (i.e. invalids benefits or long-term care facilities). Furthermore, work affects an individual's self-concept; it represents a major social role, offering self-esteem, social contact and social support. Therefore, a need exists to understand various predictors and indicators and their influence on a client's ability to return to work or education following TBI.

The present study was divided into two parts. Part one, was a retrospective analysis of a pre-existing database. In this part, the predictors: pre-injury employment status, job classification at TBI, age at TBI, years of post primary education at TBI, ethnicity, substance abuse after TBI and motor impairments, significantly influenced return to work/education and non return to work/education following TBI. The predictors: age at time of assessment, gender, substance abuse prior to TBI, injury severity, epilepsy, visual difficulties, hearing difficulties and speech difficulties, however, did not. In addition, the indicators: verbal IQ, verbal memory, attention, information processing speed and executive functioning, significantly influenced return to work/education and non return to work/education following TBI, however, the indicators: performance IQ, full scale IQ and visual memory did not.

Part two of the present study was a planned analysis. In this part, the predictors: pre-injury job classification, pre-injury job stability, tertiary qualifications and alcohol use after TBI, significantly influenced a persons job classification following TBI and/or the number of hours they were able to work per week following TBI. However, the predictors: pre-injury employment status,

age, years of post primary education, ethnicity, gender, substance use before TBI, criminal offending, injury severity, early post trauma sequelae, did not. In addition, the indicators; attention, services of a General Practitioner, the length of time a General Practitioners service was received, cognitive ability and activities of daily living as reported by a relative or close other, significantly influenced a persons job classification following TBI and/or the number of hours they were able to work per week following TBI. However, the remaining cognitive sequelae, rehabilitation information, emotional, behavioural sequelae, participant and relative/close other reports, did not.

Qualitative information was also provided by the participant and a relative or close other and the results presented.

In conclusion, the findings of both parts of the present study are discussed in relation to the findings of previous research, together with recommendations for future research.

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CHAPTER 1

INTRODUCTION

Due to a substantial reduction in the mortality rate from traumatic brain injuries, an increasing number of persons, many of working age, most with the majority of their working lives ahead of them, have begun to survive traumatic brain injury (TBI) and fail to return to work or education (RTW/E). Failure to RTW/E can significantly impact on the lives of those surviving TBI, in terms of: loss of financial independence, personal autonomy, self-esteem and social contact. Return to productive employment, however, represents a significant challenge after TBI. Successful RTW/E can restore a sense of direction, self worth and provide the foundation for long term personal, family and social readjustment (Tyerman, 1996).

Vocational rehabilitation came into focus in the 1970's as a field that faced the challenge of returning injured persons to productive employment. As technology and medical procedures have continued to expand the numbers of those persons who survive TBI, the rehabilitation industry has faced the need to expand to meet the growing demands placed upon it by survivors of TBI. Vast arrays of short and long-term deficits now challenge the rehabilitation team. Accompanying the process of recovery is often the desire to return to a productive role within the community, and therefore, the need to determine the potential of successful RTW/E and guide the process with care becomes necessary.

Although a relatively large body of research has focused on the predictors and indicators of return to work following TBI, less is known about them in the New Zealand context. The present study aims to add to the research in the area of predictors and indicators of RTW/E in the New Zealand context.

Chapter 2 introduces the concept of TBI and the associated incidence, etiologies, methods of classification and sequelae. Where possible, figures are reported for the New Zealand population, however, due to limited information, figures from overseas are also included.

Chapter 3 outlines the rates of RTW/E as reported by overseas studies as well as by a limited number of studies carried out in New Zealand and Australia. In addition the importance of work is discussed along with accompanying consequences of non-RTW/E.

Chapter 4 discusses the findings of an examination of the current literature in the area of RTW/E following TBI. The various predictors and indicators are systematically reviewed and findings from the respective studies reported and then summarised.

Chapter 5 describes the aims and rationale for the present study, and chapter 6 outlines the methodology for part one and two of the present study. Chapter 7 summarises the results and chapter 8 discusses the relevant findings, their implications and suggestions for further research.