A Longitudinal Analysis of Psychological Impact, Coping Strategies and Cognitive Appraisals Following Traumatic Spinal Cord Injury: A 21-year Follow-up

Professor Paul Kennedy1,2, Alice Kilvert1 & Laurence Hasson1

1 Department of Clinical Psychology, The National Spinal Injuries Centre, Stoke Mandeville Hospital, Buckinghamshire Healthcare NHS Trust, UK
2 Oxford Institute of Clinical Psychology Training, University of Oxford, UK

Introduction

The majority of individuals with SCI are able to effectively psychologically adjust and report a positive quality of life, although it is estimated that 25-30% suffer from depression, and longitudinal studies show that depression is highly consistent from 2 weeks to 10 years post-injury.1,2 The Stress, Appraisal and Coping Model has been successfully adapted and applied within SCI, and can affect selection of coping strategies, as well as affecting psychological related outcomes. Research has found that appraisals and coping strategies post-injury are significantly related to long-term psychological distress and quality of life.3 More research of a longitudinal nature is required to better understand the predictive values of the initial psychological response to long-term coping and adjustment. The ADAPSS was created to specifically measure appraisals within an SCI population, and has been shown to have good reliability and validity.4 The current study uses the ADAPSS to identify the relationships between appraisals, coping and psychological adjustment.

Objectives

The current study examines psychological impact and coping strategies in a cohort of traumatic spinal cord injured individuals from 12 weeks post-injury to more than 21 years post-hospital discharge. It also explores the relationships between cognitive appraisals, coping and affect. Longitudinal factors associated with mortality are also examined.

Method

This was a multiple wave panel survey which captured 44 participants from the same cohort of spinally injured people who took part in the Kennedy et al. (2000) study. All patients were admitted to the NSIC between 1990 and 1994, aged 16+ years, and had sustained a traumatic SCI. Twenty-two individuals were deceased. The remaining 22 participants were sent a consent form and a questionnaire booklet to complete and return to the NSIC. Participants completed the COPE questionnaire, Beck depression inventory (BDI), Functional independence measure (FIM), and Appraisals of DisAbility: Primary and Secondary Scale (ADAPSS).

Results

Although mean depression scores increased over the 21 year period, the proportion of the cohort meeting criteria for depression decreased from 38% at week 12 to 22% at the current time. A number of coping strategies were found to have changed significantly over time, with significant increases in ‘positive’ strategies and significant decreases in ‘negative’ strategies. A significant regression model found the coping strategy of ‘positive reinterpretation’ at week 12 predicted 37% of variance in depression at 21+ years, p = .006. Multiple significant relationships were found between depression, coping strategies and appraisals; both depression and coping strategies at week 12 were found to significantly predict variance in cognitive appraisals at 21 plus years. The participants of the current study had significantly lower depression and anxiety at week 12 than the individuals from the original cohort who are no deceased. A significant logistic regression model found the coping strategy of ‘substance abuse ideation’ at week 12 predicted 19% of variance in mortality outcome at the current time, p = .005.

Discussion

The findings suggest that a significant proportion of people with a spinal cord injury are able to cope and adjust well in the long-term, without significant impact on their psychological wellbeing. This study found considerable associations between coping strategies, psychological wellbeing and cognitive appraisals. Coping strategies in the early stages of rehabilitation are an important predictor of both long-term psychological outcomes and appraisals, and this has clinical implications for psychological aspects of rehabilitation. Preliminary findings suggest that coping strategies and psychological factors contribute to premature mortality. One limitation of concern is the problem of attrition, which restricts the reliability and generalisability of the findings.