

To the Productivity Commission
Inquiry into Disability Insurance,

We would like to draw the Commission's attention to two articles that we have recently published in the academic literature, which examine the lives of people living with a spinal cord injury in Australia. The first paper is a descriptive paper and the second paper is an analytical paper.

Rowell, D., and Connelly, L.B., (2008) "Personal assistance, income and employment: the spinal injuries survey instrument (SISI) and its application in a sample of people with quadriplegia". *Spinal Cord* 46, 417–424.
doi:10.1038/sj.sc.3102157

Rowell, D., & Connelly, L.B., "Labour market outcomes for people with a spinal cord injury", *Economics and Human Biology* 2010; 8(2): 223-232.
doi:10.1016/j.ehb.2010.05.003

The abstract for first article is:

Introduction: Our aim was to ascertain what effect access to personal care package (PCP) has on the labour market activities of people who have a spinal cord injury (SCI). We developed a new instrument called the spinal injuries survey instrument (SISI). The SISI is a 35-item instrument, which contains items on health, education, employment, along with measures of personal assistance, mobility and psychological attribution style.

Materials and methods: The SISI was administered, with the Short Form 36 (SF-36) health status instrument, to 250 people with an SCI. The response rate was 72%. A retrospective, matched case-control sampling approach matched individuals who received a PCP, with a cohort who did not. The matching criteria included the site and severity of spinal lesion, age and gender.

Results: Although data on the reliability of the instrument are currently lacking, our empirical results are consistent with other studies: (1) mean annual health care costs (AUD\$8741) are comparable with Walsh's estimates (2) SF-36 data support Kreuter's contention that mental health is resilient to SCI and (3) a post-injury employment rate of 29.7% corroborates Murphy et al. We present additional data describing income, educational attainment and family support.

Discussion: Our discussion borrows a conceptualization of disability by Sen, that includes both an 'earning handicap' (an impediment to earn income) and a 'conversion handicap' (an impediment to the enjoyment of income). Our application of the SISI provides evidence of both. The labour income of people with quadriplegia is AUD\$10 007 per annum, while diminished health status, increased out-of pocket health expenditure and loss of time suggest a conversion handicap.

The abstract for the second article is:

The consequences of spinal cord injury are profound and extend well beyond the immediate loss of mobility and sensation. Employment is a well-recognised rehabilitation goal. In this study, we examine the impact of a publicly funded “package” of services that is designed to enable people with a spinal cord injury to return to the workplace. Specifically, this package of services provided client directed assistance for assisting the recipient with the activities of daily living (e.g., bathing, food preparation, etc.). We combine primary data collection methods well developed in other scientific disciplines, but less frequently utilised within economics, with traditional econometric techniques, to present a novel approach to this methodological issue. The Spinal Injuries Survey Instrument was developed and administered using a matched sampling approach. Collected data included, labour market outcomes, exposure to the packages, as well as clinical and demographic covariates commonly identified by the spinal cord injury literature. Concern for endogeneity was addressed by collecting data on several variables that might serve as suitable instruments for the econometric work and measures of otherwise-unobserved sources of heterogeneity. For example, a psychological measure of “attributional style was adapted from the field of psychology in order to control for a potentially confounding source of latent individual heterogeneity, viz. “motivation”. While our results find zero marginal effect of support packages on labour market outcomes, we find that training undertaken post-injury and age are both positively correlated with labour market participation.

Kind regards

David Rowell