

ISPR8-2435

Predictors of disability outcome after major trauma

P. Kersten^{1,*}, K. Czuba², D. Anstiss², R. Maheswaran³,
G. Smith², N. Kayes², G. Terry², R. Siegert⁴

¹ University of Brighton, School of Health Sciences, Brighton, United Kingdom

² AUT University, School of Clinical Sciences, Centre for Person Centered Research, Auckland, New Zealand

³ AUT University, Biostatistics and Epidemiology, Auckland, New Zealand

⁴ AUT University, Department of Psychology, Auckland, New Zealand

* Corresponding author.

E-mail address: p.kersten@brighton.ac.uk (P. Kersten)

Introduction/Background Many people survive major trauma, often with complex consequences of their injuries. However, data on outcomes is lacking. This paper aims to evaluate disability and functional outcomes after major trauma at 12-months post-injury.

Material and method A one-year prospective cohort study of major trauma survivors, recruited from two major trauma centres in New Zealand. In- and exclusion criteria are in Table 1. Baseline variables included demographics, Injury Severity Score, diagnosis, cause of injury, length of hospital stay (LOS). Twelve-months post-injury participants completed the Extended Glasgow Outcomes Scale (GOS-E), the Short-Form 12 (SF12), the EQ5D, Pain Numeric Rating Scale (NRS), World Health Organization Disability Assessment Schedule 2.0 (WHODAS), questions regarding productivity status. Ordinal step-wise regression was performed to investigate the impact of baseline variables on GOS-E outcome. Ethical approval was received from the Health and Disability Ethics Committee of New Zealand.

Results One hundred and twenty-one people took part (response rate 58%), the majority having received injuries through road traffic accidents (33%) or falls (24%); 58% sustained neurological injuries. 69% were in paid employment pre-injury, 41% at 12 months. Thirty-six percent reported experiencing moderate to severe pain within the last 24 hours at 12-months post-injury. Ongoing disability was significant as measured with the GOSE (15% severe and 32% moderate disability) and WHODAS (23%). Many had ongoing problems with mobility (33%), usual activities (39%), pain (52%) and anxiety (34%) (EQ5D). Ethnicity ($P=0.003$), LOS ($P=0.002$), education ($P=0.056$) and comorbidity ($P=0.051$) were significant predictors of GOS-E outcome (Table 2).

Conclusion A significant proportion of major trauma survivors experience ongoing disability a year later. Some of the significant predictors suggest health outcomes are poorer for disadvantaged groups, who should be better supported by rehabilitation services.

Keywords Major trauma; Disability; Pain

Table 1 Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
a) Injury Severity Score ≥ 12	a) unable to speak / understand English sufficiently to complete assessments
b) aged ≥ 18	b) deceased
c) admitted to Auckland District Health Board (DHB) or Counties Manukau DHB following their trauma	c) acquired major trauma due to drowning, poisoning, hanging (where only asphyxia occurs without other physical injury), or burns (i.e. where burns were a major component requiring admission to a burns unit)
d) sustained their injury between 15th June 2015 and 14th December 2015	
e) living permanently in New Zealand	

Table 2 GOS-E predictor variables.

Variable	Groups	Odds ratio with 95% CI
Ethnicity	Māori*	1
	Asian	0.12 (0.005, 1.14)
	NZ European	0.19 (0.05, 0.67)
	Pacifica	3.36 (0.49, 25.04)
	Other	0.28 (0.04, 1.43)
Secondary Education	No*	1
	Yes	0.32 (0.10, 1.03)
Comorbidity	No*	1
	Yes	2.60 (0.99, 7.08)
Length of hospital stay		1.04 (1.01, 1.07)

* Reference group for analysis

Disclosure of interest The study received funding from the Accident Compensation Corporation of New Zealand. The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the funder.

<https://doi.org/10.1016/j.rehab.2018.05.267>

ISPR8-2500

Comparison of participation and health-related quality of life between persons with neurological and rheumatic diseases

B. Sonel Tur¹, M. Kurt¹, D. Özmen², A.A. Küçükdeveci^{1,*}

¹ Ankara University, Faculty of Medicine, Department of Physical Medicine and Rehabilitation, Ankara, Turkey

² Ankara University, Faculty of Medicine, Department of Biostatistics, Ankara, Turkey

* Corresponding author.

E-mail address: ayse.kucukdeveci@gmail.com (A.A. Küçükdeveci)

Introduction/Background Both neurological and rheumatic diseases constitute significant causes of disability. Participation (defined as involvement in a life situation) and health-related quality of life (HrQoL) are considered important outcomes in physical and rehabilitation medicine. Documentation of participation and HrQoL in various disabling conditions would guide rehabilitation professionals while planning their treatment interventions. The aim of this study is to determine and compare the participation and HrQoL of people with neurological versus rheumatic diseases.

Material and method Ninety patients with neurological disorders (44% stroke, 23% spinal cord injury, 20% Parkinson's) and 89 patients with rheumatic diseases (49% osteoarthritis, 33% rheumatoid arthritis, 18% ankylosing spondylitis) who were in the follow-up at the department of physical medicine & rehabilitation of a university hospital were included. Participation was assessed by Impact on Participation and Autonomy Questionnaire (IPAQ), HrQoL by Nottingham Health Profile (NHP) and activities of daily living by Modified Barthel Index (MBI).

Results Mean age was 58.1 in neurological patients (61% male) and 61.5 in rheumatic patients (19% male). Mean disease duration was 40.3 months in neurological group while it was 170.6 in the rheumatic group.

MBI score was significantly lower in neurological group ($P=0.0001$) showing more dependence in activities of daily living. Comparison of IPAQ revealed that neurologic patients experienced more participation restriction than rheumatic patients regarding autonomy indoors ($P<0.0001$), family role ($P=0.023$), autonomy outdoors ($P=0.001$), and work and education ($P=0.05$) while social life was similar. Rheumatic group reported more distress in pain ($P<0.0001$) and sleep ($P=0.009$) domains of NHP, whereas neurologic group was worse in physical mobility ($P=0.012$). Fatigue, social isolation and emotional reactions domains did not differ.

Conclusion Although neurological diseases had great impact on physical activities and participation of patients, their social and emotional aspects of health status were similar with patients