

# Rehabilitation Research Review

Making Education Easy

Issue 4 – 2008

## In this issue:

- *Course and prognostic factors of whiplash*
- *Psychosocial adjustment after traumatic brain injury*
- *Improving diagnostic disclosure in dementia*
- *Experienced consequences of an acute hip fracture*
- *Statistical guidelines for authors*
- *Development of evidence-informed health policy*
- *Psychological interventions for chronic health conditions*
- *Interventions to improve medication adherence*
- *Predicting outcome after mild traumatic brain injury*
- *Designing legal services for disabled people*

## Welcome to the the fourth issue of Rehabilitation Research Review.

This month, we cover a wide range of topics, from an article listing criteria to be addressed in a research paper intended to help authors in the review process, to the development of legal services for disabled people in New Zealand, and a qualitative analysis of the barriers and facilitators of evidence-informed health policymaking.

We are delighted to have continued support for this publication from the Accident Compensation Corporation.

I hope you enjoy the latest edition and welcome your comments and feedback.

Kind regards,

**Kath McPherson**

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## Course and prognostic factors of whiplash: A systematic review and meta-analysis

**Authors:** Kamper SJ et al

**Summary:** In this systematic review and meta-analysis, results were evaluated from 38 separate cohort studies that enrolled subjects with acute whiplash injuries within six weeks of a car accident; the aim was to describe the course of recovery, pain and disability symptoms and also to assess the influence of different prognostic factors on outcome. Recovery rates varied greatly between studies but homogeneity was improved when data were restricted to studies of more robust methodological quality. These data indicated that recovery occurs for a substantial proportion of subjects in the initial 3 months after the accident but then levels off. Similarly, pain and disability symptoms reduce rapidly in the initial months after the accident but fail to improve much beyond the first 3-month period.

**Comment:** As so many systematic reviews conclude, this one also finishes with a plea for more robust research. Nevertheless, Kamper and colleagues provide a well-structured account of three key issues in whiplash: the course of pain and disability; recovery rates, and; factors associated with better prognosis. A key concern has to be that the level of pain and disability at three months pretty much remains at that level in the long-term. Indeed, this review suggests this to be the situation for a significant number of people. Clearly, early management strategies are vital and work for many but, it seems different approaches to those currently used are needed once the condition becomes more chronic. Another case of right treatment at the right time with more robust research needed to identify just how strategies need to change once that early intervention window has closed.

**Reference:** *Pain*. 2008;138:617-29

[http://www.painjournalonline.com/article/S0304-3959\(08\)00103-6/abstract](http://www.painjournalonline.com/article/S0304-3959(08)00103-6/abstract)



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## Understanding adjustment following traumatic brain injury: Is the Goodness-of-Fit coping hypothesis useful?

**Authors:** Kendall E and Terry DJ

**Summary:** The purpose of this study was to investigate the usefulness of the Goodness-of-Fit hypothesis (based on the Lazarus and Folkman model of stress) as a way of understanding coping effectiveness in a cohort of 90 patients with traumatic brain injury from an inpatient rehabilitation unit and their relatives. The model was not supported in the short- or long-term. Problem-focused coping strategies were positively associated with short-term and long-term role functioning, but not with long-term emotional well-being if the situation was perceived to be controllable.

**Comment:** Working with people in rehabilitation means just that – working with people. Expert knowledge about the nature of a condition and well-honed technical skills associated with one's own profession form just part of the skill set required. Whilst in some ways this paper promotes more questions than it answers, it is interesting for a number of reasons. Firstly, the authors test out the extent to which a well-accepted theory applies in disabled populations, rather than assuming it is appropriate. Secondly – the journal is one that rehabilitation professionals may not necessarily look to. Social Science in Medicine often has really interesting papers and is well worth seeking out. Lastly – the authors point out that one of the central tenets of most definitions of rehabilitation (i.e. that it is an educational and problem-solving approach) may have some limits in relation to enhancing emotional adjustment.

**Reference:** *Soc Sci Med.* 2008;67:1217-24

<http://tinyurl.com/6qz492>

*Research Review publications are intended for New Zealand health professionals.*

## Appropriate disclosure of a diagnosis of dementia: identifying the key behaviours of 'best practice'

**Authors:** Lecouturier J et al

**Summary:** In an attempt to comprehensively define the different behaviours that contribute to the process of diagnostic disclosure in dementia, these researchers conducted a literature review, interviewed four people with dementia and six informal carers, and formed a consensus panel with eight health and social care professionals. A total of 220 behaviours were identified, 109 of which overlapped. The interviews and consensus panel elicited 27 behaviours supplementary to the review. Behaviours from the interviews appeared to be self-evident but highlighted deficiencies in current practice and those from the panel focused largely on balancing the needs of people with dementia and family members. Content analysis grouped behaviours into eight categories: preparing for disclosure; integrating family members; exploring the patient's perspective; disclosing the diagnosis; responding to patient reactions; focusing on quality of life and well-being; planning for the future; and communicating effectively.

**Comment:** This paper reminded me that things we sometimes consider one-off events are anything but that for the people we are engaging with. Given that over 220 different behaviours were identified associated with this one process (diagnosis disclosure) in just one population (dementia), it left me wondering how many other 'events' may be more complex for our patients/clients than we anticipate or allow for (in fact – see the paper by Zidén referred to in this issue of Research Review for another example). Another thing worth knowing is that the journal this paper is published in is 'open access', meaning freely available with no subscriptions required.

**Reference:** *BMC Health Serv Res.* 2008;8:95

<http://www.biomedcentral.com/1472-6963/8/95>

## A life-breaking event: early experiences of the consequences of a hip fracture for elderly peoples

**Authors:** Zidén L et al

**Summary:** Semi-structured interviews of 18 elderly home-dwelling people one month after discharge from hospital after an acute hip fracture express their experiences of changes as a consequence of the fracture. These experiences describe limitations in movement, a loss of confidence in the body, becoming humble and grateful, respecting oneself and one's own needs, becoming more dependent on others, gaining more human contact and being treated in a friendly way by others, being secluded and trapped at home, feeling old, closer to death and having lost their zest for life, taking one day at a time and being uncertain about the future.

**Comment:** This paper needs no further comment to that in this issue of Rehabilitation Research Review concerning Lecouturier's paper... so I shall be uncharacteristically brief!

**Reference:** *Clin Rehabil.* 2008;22:801-11

<http://cre.sagepub.com/cgi/content/abstract/22/9/801>



*Independent commentary by Professor Kath McPherson, Professor of Rehabilitation (Laura Fergusson Chair) at the Health and Rehabilitation Research Centre, AUT University in Auckland.*

*Kath has been at AUT since 2004 and has been building a research, teaching and consultancy programme focused on improving interventions and outcomes for people experiencing disability.*



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## Statistical reviewing for disability and rehabilitation

**Authors:** Rigby AS

**Summary:** This article aims to help authors in the review process, listing a number of criteria that the paper argues any statistician would expect authors to address. These criteria include: power and sample size; appropriately reporting demographic data (continuous vs categorical) and statistical testing; statement of statistical assumptions; model building and validation; attention to missing data; documentation of the extent of non-responders; reporting sample statistics by confidence intervals; p-values; figures and tables; rendering of units and measurements; advising of REC/IRB approval; reference to Bradford Hill criteria; specialist methods for different topics; acknowledging the study's limitations; and advice on attending to necessary finishing details. Attending to these criteria should enable authors to deal with statistical issues that might arise, concludes the article.

**Comment:** One barrier to feeling positive about reading research can be how the numerical data are managed – i.e. the statistics. Whilst this paper is primarily directed at people wanting to write research papers, the information contained is really helpful for readers, with the author providing a pretty straightforward description of common statistical issues. To that end – it might make it easier to 'feel the fear and do it anyway' when it comes to considering statistics in journal articles. There are of course numerous papers in health research methods and statistics that take these issues further, but that would *really* mean feeling the fear and doing it anyway!

**Reference:** *Disabil Rehabil.* 2008 Jun 17:1-7. [Epub ahead of print]

<http://tinyurl.com/5gjr4q>

## “Developing good taste in evidence”: facilitators of and hindrances to evidence-informed health policymaking in state government

**Authors:** Jewell CJ and Bero LA

**Summary:** Interviews with 28 state legislators and administrators about their real-life experiences incorporating evidence into health policymaking were coded inductively into four categories: the important or controversial issue or problem being addressed; the information that was used; facilitators, and; hindrances. Hindrances to the incorporation of research into policy included institutional features; characteristics of the evidence supply (e.g. research quantity, quality, accessibility, and usability); and competing sources of influence, such as interest groups. The policymakers identified a number of facilitators to the use of evidence, including linking research to concrete impacts, costs, and benefits; reframing policy issues to fit the research; training to use evidence-based skills; and developing research venues and collaborative relationships in order to generate relevant evidence.

**Comment:** Now there's an idea – researchers and policymakers collaborating so that *more* research can be *more* influential when it comes to making policy decisions. In New Zealand, it seems to me that we have made some good steps towards this and also to including service users and clinicians in those collaborations. However – the lessons from this US study may be of help if we are to increasingly match the calls for 'evidence-based practice' with 'evidence-based policy'. Again – the full paper is available freely as it is the featured article in the Milbank Quarterly this month.

**Reference:** *Milbank Q.* 2008;86:177-208

<http://www.milbank.org/quarterly/MQ%2086-2%20FeatArt.pdf>

## Psychological interventions for long-term conditions: a review of approaches, content and outcomes

**Authors:** Doyle C et al

**Summary:** Evidence was evaluated from nine Cochrane reviews of 131 clinical trials involving over 20,200 adults participating in psychological interventions for common chronic health conditions across the healthcare settings of asthma (n=1), diabetes (n=2), coronary heart disease (n=1), and chronic musculoskeletal pain (n=5). These researchers sought to inform the management of, and future research in, patients with chronic musculoskeletal pain. Of the various psychological interventions, many used a variety of cognitive behavioural therapy, delivered mostly by nurses or psychologists within secondary care settings. Physiotherapists were involved in some studies as part of multidisciplinary teams. The complexity and diversity of the interventions prevented identification of individually effective components and heterogeneity in intervention content, delivery and outcomes measured made interpretation of the studies difficult.

**Comment:** This paper provides a timely summary of evidence regarding psychological interventions in long-term conditions. There is undoubtedly more to do both as clinicians (to be aware of the potential importance of psychologically enhanced 'physical' rehabilitation) and as researchers (to improve the evidence quality to inform developments). However – it is encouraging that physiotherapy is questioning the state of knowledge and in doing so, contributing to its development.

**Reference:** *Physiother Res Int.* 2008;13:138

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## Interventions for enhancing medication adherence

**Authors:** Haynes RB et al

**Summary:** This update of a 2005 review included results from 78 randomised controlled trials of interventions designed to improve adherence with prescribed medications for medical problems, including mental disorders but not addictions. In nine studies that evaluated short-term adherence to drug regimens (between one and three weeks), four of 10 strategies seemed to improve adherence and  $\geq 1$  clinical outcome, while one strategy significantly improved patient adherence, but did not enhance the clinical outcome. For long-term strategies, only 25 of 81 reported in 69 studies led to improvement in  $\geq 1$  treatment outcome, while 36 strategies improved adherence. The more successful approaches included combinations of more convenient care, information, reminders, self-monitoring, reinforcement, counselling, family therapy, psychological therapy, crisis intervention, manual telephone follow-up, and supportive care.

**Comment:** These findings (that most strategies to promote medication adherence have little effect) are quite sobering but perhaps not surprising. Certainly, it should prompt serious thought about the wisdom of providing 'more of the same' when it comes to rolling out self-management programmes. Some new approaches are needed and I completely agree with the authors that innovation is not always needed in 'new treatments', but in ways to enhance the acceptability and perceived relevance of treatments we know are effective (whether that be medications, activity or other rehabilitation strategies where adherence is an issue). By the way – the Cochrane website now also contains podcasts of reviews – so you don't even have to read this paper – you can listen to it!

**Reference:** *Cochrane Database Syst Rev. 2008, Issue 1. Art. No.: CD000011*

<http://tinyurl.com/5nr6qa>

**Disclaimer:** This publication is not intended as a replacement for regular medical education but to assist in the process. The reviews are a summarised interpretation of the published study and reflect the opinion of the writer rather than those of the research group or scientific journal. It is suggested readers review the full trial data before forming a final conclusion on its merits.

## Early prediction of favourable recovery 6 months after mild traumatic brain injury

**Authors:** Stulemeijer M et al

**Summary:** This study evaluated the clinical application of two prediction models developed for early identification of patients with the highest chance for good recovery at six months after mild traumatic brain injury (MTBI). At follow-up, 64% of the 201 participating patients reported full recovery. According to logistic regression analyses, patients who had a 90% chance of remaining free of postconcussional symptoms (PCS) were those without premorbid physical problems, low levels of PCS and post-traumatic stress early after injury. Those who had a 90% chance of full return to work were patients with over 11 years of education, without nausea or vomiting on admission, with no additional extracranial injuries and only low levels of pain early after injury. The models had an AUC of  $>0.70$  after correction for optimism, indicating satisfactory discriminative ability.

**Comment:** One-third of this sample reported persisting postconcussion symptoms, incomplete return to work, or both at six months after mild TBI. This is likely to be higher than 'reality' as those who have fully recovered sadly tend not to take part in research – these authors and others suggest it is more likely to be around 75%. It is becoming increasingly clear that unlike moderate and severe TBI, duration of loss of consciousness and post-traumatic amnesia are not good predictors of 'recovery' from mild injury. The authors here make a good case for a wider consideration of factors, i.e. to include things unrelated to the injury in considering who is at risk of prolonged postconcussion symptoms and difficulty returning to work. We need more research and better evidence but we have enough to do better than we have been. Otherwise, we are likely to be wasting resources and at the same time, missing those who need help and advice early on.

**Reference:** *J Neurol Neurosurg Psychiatry. 2008;79:936-42*

<http://jnnp.bmj.com/cgi/content/abstract/79/8/936>

## The challenge of designing optimum legal services for disabled people: the New Zealand experience

**Authors:** Diesfeld K et al

**Summary:** In 2005, New Zealand's Legal Services Agency commissioned research into identifying the gaps in legal services for Aucklanders; this article is based on the literature review that reported the legal issues faced by disabled people in Auckland. The social model is offered as a philosophical framework for many of the gaps in services; a model in which the disabled state is explained as a consequence of social barriers, rather than a condition of the individual. The authors suggest that this model, and scholarship from disability studies, may inform future service development. Further, they discuss how models developed in other countries may provide structures and inspiration for New Zealand's own disability-based legal services.

**Comment:** Apparently, a number of reviews have been done of disabled people's legal needs. However, a number of those did not actually survey disabled people, which does make one question how accurately those needs were identified. This new review provides a really useful summary of the sorts of legal issues confronting disabled people as well as highlighting how the legal system itself can be disabling. The authors state 'Importantly, disabled people have legal needs distinctively different from other groups and in particular have great difficulty resolving specific issues in relation to statutory entitlements (e.g. education, benefits, accident compensation and health services)'. Given that legal issues concern our clients, I for one probably should know a little more and this paper is a good place to start.

**Reference:** *Disabil Soc. 2008;23:431-43*

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