

Rehabilitation Research Review™

Making Education Easy

Issue 31 – 2014

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Abbreviations used in this issue

SCI = spinal cord injury
TBI = traumatic brain injury



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Welcome to the thirty-first issue of Rehabilitation Research Review.

In this issue of Rehabilitation Research Review I am profiling a number of recent papers and a book from NZ. Why? Well, I think we punch above our weight in rehabilitation research, a view I have heard expressed by international colleagues. I love seeing work come from my colleagues and am proud of the contribution they make to advancing knowledge and contributing research that aims to enhance rehabilitation service delivery and help improve outcomes. I have also included one or two papers from elsewhere including one with a commentary from Paula Kersten as a change to hearing my view all the time – and reference to a TED talk just for a change. I hope you find this issue interesting and a good way to catch up on what is going on in rehabilitation research.

Kind regards,

Kath McPherson

Professor of Rehabilitation (Laura Fergusson Chair),
The Health and Rehabilitation Institute, AUT University
kathmcpherson@researchreview.co.nz

Using mixed methods to build research capacity within the spinal cord injured population of New Zealand

Authors: Sullivan M et al.

Summary: This article describes findings from a 4-year longitudinal study that commenced in 2007, involving all people admitted to the two New Zealand spinal units. The study set out to explore inter-relationship(s) of body, self, and society for people with spinal cord injury (SCI) and to investigate how entitlement to rehabilitation and compensation through New Zealand's Accident Compensation Corporation affects socioeconomic and health outcomes. The study authors explain how they worked within the emancipatory-transformative research paradigm, with the underlying intention of building research capacity among people with SCI by recruiting them onto the research team (in addition to the principal investigator who has a SCI). The article focuses on what constitutes ethical disability research, selection of the research paradigm, the assembling of the research team, and the flexibility provided by the use of mixed methods to achieve these ends.

Comment: It's perhaps understandable that we tend to look for those publications that answer specific questions – so in the case of this work, I now really want to know what the outcomes and experiences for SCI in NZ are! But as important as those findings are – this paper addresses a similarly important question around how best to go about developing that knowledge. Martin Sullivan (from Massey University) and his colleagues explore a number of methodological and ethical questions (if not dilemmas) and the paper highlights that doing things differently (here including the people we are researching as co-researchers) can make a very real difference to the knowledge produced, and other 'value add' in research.

Reference: *J Mixed Method Res* 2014 May 28. [Epub ahead of print]

[Abstract](#)

Rehabilitation Research Review

Independent commentary by Professor Kath McPherson.

Kath McPherson is Professor of Rehabilitation (Laura Fergusson Chair) at the Health and Rehabilitation Research Centre, AUT University in Auckland. She completed a PhD at the University of Edinburgh exploring how individuals and their families recover and adapt after moderate to severe brain injury. From 1997-2001, Kath worked at the Rehabilitation Teaching and Research Unit at University of Otago - Wellington, then taking up a post as Reader in Rehabilitation at the University of Southampton.

For full bio [CLICK HERE](#).



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.

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A randomized controlled trial of emotion recognition training after traumatic brain injury

Authors: Neumann D et al.

Summary: Outcomes are reported for 71 patients (mean age 39.8 years) with moderate-to-severe traumatic brain injury (TBI) attending post-acute rehabilitation facilities who were randomly assigned to one of two affect recognition interventions: Faces (n=24) or Stories (n=23), each of which involved 9 hours of computer-based training with a therapist, or to the Control intervention (with any such training; n=24). Participants were an average of 10.3 years post-injury. At 6 months post-treatment, the Faces Intervention did significantly better than the Control Intervention on the Diagnostic Assessment of Nonverbal Accuracy 2-Adult Faces (p=0.031); no other significant between-group differences were noted for the Faces Intervention. No significant differences were observed between the Stories and the Control Interventions; however, a significant time effect was found for the Emotional Inference From Stories Test.

Comment: Duncan Babbage (latterly from Massey and now at AUT) is part of the team who led this recent work investigating a new intervention for helping people recognise others' emotions post-TBI. One might imagine this is an infrequent effect or not particularly distressing or disabling. But prevalence studies suggest it is reasonably common and that missing key facial indicators of emotion leads to distress – not just for the person with TBI but the person whose emotions have been missed (spouse, colleague, employer, son or daughter). This trial showed that a relatively straightforward intervention (9 x 1-hour sessions) made a difference that was sustained. The study findings are interesting in their own right, but given participants were an average of 10 years post-injury, the study provides further evidence that improvement in a number of areas of impairment and function are possible for many years. That's a good news story.

Reference: *J Head Trauma Rehabil* 2014 May 16. [Epub ahead of print]

[Abstract](#)

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WWW.RESEARCHREVIEW.CO.NZ

Bridging the gap between goal intentions and actions: a systematic review in patient populations

Authors: Kersten P et al.

Summary: This group of researchers from the Auckland University of Technology systematically reviewed the literature for evidence on the effectiveness of *if-then* implementation intentions (*if-then* plans) in adult patient populations. *If-then* plans are intended to support people deal more effectively with self-regulatory problems that might undermine goal striving and goal attainment, and have proven to be effective in health promotion and health behaviour change. Of 18 randomised controlled trials that were identified as potentially relevant, 4 studies involving people with epilepsy, chronic back pain, stroke and obesity used an *if-then* plan and satisfied the inclusion criteria for this review. Outcomes of interest included adherence, goal pursuit and physical health outcomes. Three of the studies demonstrated effectiveness, with people who formed *if-then* plans achieving better outcomes on epilepsy and stroke medication adherence and physical capacity than controls.

Comment: See below.

Reference: *Disabil Rehabil* 2014 Jul 7. [Epub ahead of print]

[Abstract](#)

Bridging the goal intention-action gap in rehabilitation: a study of *if-then* implementation intentions in neurorehabilitation

Authors: Kersten P et al.

Summary: This feasibility study recruited 20 patients with multiple sclerosis and stroke who were experiencing difficulties with mobility. They were randomised to either an experimental group or a control group, each of which set up to 3 mobility-related goals with a physiotherapist. The experimental group also formulated *if-then* plans for every goal. Focus groups and interviews were conducted with participants and therapists. In qualitative analyses of the data, one main theme emerged: Rehabilitation in context, encapsulating the usefulness of the *if-then* strategy in thinking about the patient in the context of complexity, the usefulness of home-based rehabilitation, and the perceived need for a few more sessions. Changes in walking speed were in the expected direction for both groups; Patient Activation Measure scores improved over 3 months in both groups.

Comment: Two 'in press' papers for the price of one... Paula Kersten and colleagues have recently published two papers in *Disability and Rehabilitation* focusing on that hallowed issue of 'generalisation' or 'transferability' or 'carry over' – how best to help patients and clients put into practice their goal plans once they are in their own environment. On the whole, it is really difficult for most of us to put into practice what we intend to do – I experience many personal failures of implementation ranging from intending to exercise more (and as soon as it rains I decide going home is far wiser than going for a walk after work), not drink wine during the week (but then – it's a gorgeous sunny evening and a glass of something on the back deck would be so nice) and so on and so on. Interestingly, we tend to assume there is a clear link from our (and our patient/client) intentions to their actions but that link is very tenuous especially when the rewards of carrying through come down the line rather than immediately and a number of other reasons very relevant to rehabilitation. These two papers consider an approach increasingly used in behaviour change to make carrying over the intentions simpler and more likely to be actioned in smoking cessation, exercise and so on. The review shows it is pretty new to rehabilitation (paper 1) and the pilot study (paper 2) showed that patients and clinicians liked the strategy and found it useful. More evidence to accrue for this sort of approach but – it looks promising to me.

Reference: *Disabil Rehabil* 2014 Aug 28. [Epub ahead of print]

[Abstract](#)

Self Management– a new approach that's empowering seriously injured clients

National Roll Out – Self Management

Clients whose injury related needs haven't changed in the last two years and who are in stable living situations, are given control of the supports they need for everyday living, including managing their own funds. This approach to providing services to the long-term injured is in line with both international practice as well as initiatives such as the New Zealand Disability Strategy (NZDS) and promotes independence, flexibility and control.

Self-management, an initiative piloted with a selection of seriously injured clients is now rolling out nationally. Feedback from clients who participated in the pilot has been extremely positive; with many telling us that it's been hugely empowering, increased their independence and given them more control. All of our seriously injured clients with stable needs can now manage their everyday supports themselves thanks to the success of the pilot.

For more information, see www.acc.co.nz

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Twelve-month post-injury outcomes for Māori and non-Māori: findings from a New Zealand cohort study

Authors: Maclennan B et al.

Summary: The Prospective Outcomes of Injury Study recruited 2856 New Zealand residents from 5 regions of New Zealand. At 12 months post-injury, high levels of adverse outcomes were evident in both Māori (n=405) and non-Māori (n=1875), although higher proportions of Māori than non-Māori were experiencing disability, problems with mobility and psychological distress. In analyses that controlled for pre-injury and injury-related characteristics, Māori were at greater risk of disability, of having problems with mobility, having trouble performing usual activities, being in psychological distress and were more likely to report 'barely/not enough' household income at 12 months compared to non-Māori.

Comment: Researchers at the University of Otago (led by Sarah Derrett, who has now moved to Massey University) have produced a number of publications from The Prospective Outcomes of Injury Study (POIS). This paper sadly confirms what a number of other studies have found – that outcomes are worse for Māori, and that the reasons are unclear. The latter finding is particularly frustrating because it's hard to change things if we don't know the cause. We can probably 'assume' (in the absence of clear explanations for why) that reasons for disparity include a complex array of factors including – racism. A 2013 paper by some other University of Otago researchers addresses the relationship between ethnicity, health and racism and it makes challenging reading (full text available at: <http://www.biomedcentral.com/1471-2458/13/844>).

Reference: *Aust N Z J Public Health* 2014;38(3):227-33

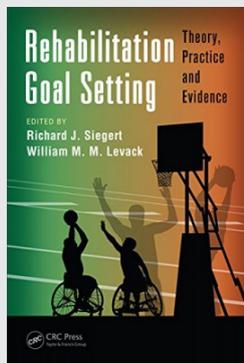
[Abstract](#)

Rehabilitation goal setting: theory, practice and evidence

Editors: Siegert RJ, Levack WMM

Summary: This book has been written for the rehabilitation service. It aims to provide clinicians, educators, researchers, and students in rehabilitation with a comprehensive overview of the theory, practice, and evidence base of goal setting. It covers a broad range of different approaches to goal setting, with expert input from North America, Europe, and Australia. The book applies to patients with stroke, TBI, neurological disorders, SCI, and other conditions.

Comment: One pretty major rehabilitation publication from Kiwis in the last few months (in size and I think importance!) is this book edited by Richard Siegert here at AUT and William Levack at the University of Otago (Wellington). This text covers a wide range of really interesting reviews of the past, contemplations on the present – and some new ideas for the future. It has received glowing reviews from some leaders in the field so if you do goal setting (and I am pretty sure most readers of Rehab Research Review do goals), you may like to get your hands on a copy. Our group here at www.pcr.ac.nz contributed a chapter proposing a new approach that emphasises a) finding out what is Meaningful b) explicitly Anchoring 'therapy goals' or 'sub steps' to what is meaningful, and c) focusing on addressing that gap between what people intend to do, and what they actually do using *If-then* Plans (See Kertsen et al. in this issue). For more details see <http://www.crcpress.com/product/isbn/9781439863299>.



Reference: *Rehab Sci Pract Series*

<http://www.amazon.com/Rehabilitation-Goal-Setting-Practice-Evidence/dp/1439863296>

Self-reflective meaning making in troubled times: change in self-identity after traumatic brain injury

Authors: Thomas EJ et al.

Summary: These researchers identified 110 articles in the literature relating to the concept of change in self-identity following TBI. Using critical appraisal, content analysis, and analytical questioning, the researchers explored attributes and boundaries in these articles. They describe a reported change in self-identity as being the ultimate expression of a variety of cognitive, psychological, and social sequelae of TBI. The integrative model of this process discussed in the article identifies three potential levels of change: (a) component parts (egocentric self, sociocentric self, and "identity as shared with others"); (b) integral processes (self-awareness and expression via meaningful occupation and narratives); and (c) whole-system disruption. The researchers note that change in self-identity after TBI is a highly individualistic process. They go on to say that "self-reflective meaning making" supports this process and offers a sense of purpose and direction in life, providing motivation and goals for future behaviour.

Comment: This piece of work comes from a PhD student's work from Otago and pursues a topic I find very interesting – how people make sense of 'who they are' after brain injury. We spend a lot of time talking about outcomes, and working to achieve meaningful outcomes for and to clients. But more and more research is highlighting that a core component of what clients think is a meaningful outcome is a sense of self, identity, what it is 'to be'. I don't know about you but my health professional training did not equip me with the skills I need to 'work with identity' and I sense a collective pulse racing as we think about how that fits with professional scopes of practice. But if it matters – perhaps we need to know more.

Reference: *Qual Health Res* 2014;24(8):1033-47

[Abstract](#)



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Te Kaporeihana Āwhina Hunga Whāra

The patient's experience of the psychosocial process that influences identity following stroke rehabilitation: a metaethnography

Authors: Hole E et al.

Summary: This metaethnography review explored how a patient's experience of stroke rehabilitation influences their outcomes. A systematic search of 4 databases identified 13 qualitative studies published since 2000 that met the inclusion criteria (i.e., studies in which $\geq 50\%$ of their results section was focused on stroke survivors experiences and they reflected an overarching experience of stroke rehabilitation). The researchers constructed a model of recovery to conceptualise how the recovery of stroke survivors' sense of identity changes during rehabilitation, illustrating changes and evolution over time.

Comment (Paula Kersten): I came across this interesting UK paper in an open access journal that I had not previously heard of which synthesises previous qualitative research to create a model of how patients' experiences of rehabilitation after stroke influence outcomes. Two themes were identified: (1) Evolution of identity encapsulated the sense of one's identity that is influenced by one's previous life, by the self-realisation of the meaning of stroke in their lives, and the reintegration of identity with their life after stroke. People talked about the importance of belonging, sense of identity and occupation (from KM – see Thomas et al. also in this issue). (2) Psychosocial constructs that influence experience included social support, autonomy to help build self-esteem and confidence, coping and adjustment to the effects of stroke, and the importance of hope, motivation and mastery experiences. There were some limitations to this study and perhaps some relevant studies were missed, but it is a good reminder that there is a need to be cognisant of an individual's previous identity and how this changes following a stroke, as well as the importance of autonomy over some of the rehabilitation processes and the importance of hope.

Reference: *Sci World J Vol. 2014, Article ID 349151, 13 pages, 2014*

[Abstract](#)

Rehabilitation Research Review

Independent commentary by Paula Kersten.

Paula is a physiotherapist and Associate Professor of Rehabilitation at AUT who moved to NZ from the UK in 2011. Her main research interests are in improving outcome measurement.

Client-centred practices and work in inpatient rehabilitation teams: results from four case studies

Authors: Papadimitriou C, Cott C

Summary: These researchers performed 40 ethnographic observations of team and clinical encounters for 6 months, and conducted interviews with 45 healthcare professionals (HCPs), in order to explore the relationship between client-centredness and work in teams in inpatient rehabilitation. HCP perceptions helped to identify intra-team and organisational factors that influence client-centred practice in rehabilitation. Team factors included relational and communication dimensions affecting work that can hinder or facilitate client-centredness. The paper discusses all of these dimensions. HCP perceived organisational factors such as workload, schedules and hospital culture to influence their work on teams and with clients.

Comment: This US/Canadian study identifies that a commonly used phrase that sounds intuitive and straightforward (client-centredness) is anything but! I guess we shouldn't be surprised that yet again the structures (such as organisational factors) are key to influencing the processes (such as client-centred practice) – and that there is a complex relationship between different processes (like teamwork and client centredness). Of course the key is – how does this impact on outcome – the last of the trilogy of factors that Donabedian identified many years ago as being the key components of any healthcare episode.

Reference: *Disabil Rehabil 2014 Aug 28. [Epub ahead of print]*

[Abstract](#)

Measures of patients' expectations about recovery: a systematic review

Authors: Ebrahim S et al.

Summary: This systematic review included 46 studies that explored the association between patients' expectations of recovery, and return to work or claim resolution. Twenty-seven (59%) studies were rated as low quality, primarily due to substantial missing data and inappropriate adjustment for age, gender and illness severity in their regression models. Five measures and 41 individual items were found to assess recovery expectations. Three of 7 (43%) studies using a measure to assess recovery expectations reported psychometric properties; only one reported both reliability and construct validity. Only two measures (Expectations of Recovery Scale and the Work-related Recovery Expectations Questionnaire) were externally validated in different populations. Overall, 44 (96%) studies found that patient recovery expectations was a significant predictor of return to work or sick leave/disability claim resolution.

Comment: I really like systematic reviews because they are a great way to catch up on information in a field. Whilst this study supports the increasingly widely-held view that expectations are a key predictor of return to work and satisfactory resolution of insurance claims, it also highlights that better research and better measures of expectations are needed. Bad measures produce bad data and that is not a good way to inform decisions.

Reference: *J Occup Rehabil 2014 Aug 7. [Epub ahead of print]*

[Abstract](#)

There are no scraps of men

Author: Cairo A

Summary: Alberto Cairo, head of the physical rehabilitation programme of the International Committee of the Red Cross (ICRC) in Afghanistan since 1990, runs the 7 ICRC prosthetic/orthotic centres in the country, which provide disabled people with physical rehabilitation and help them regain their place in society. This poignant video reinforces the message that physical rehabilitation is a priority.

Comment: I stumbled across this TED talk from 2011 last week and found it a moving and challenging reflection on rehabilitation, work, health and identity. Albert Cairo talks about how working with one particular patient brought significant changes to the way he ran the Red Cross orthopaedic rehabilitation service in Afghanistan. I shared this video with a group of Voc Rehab students recently and we all agreed there were lessons for us in his talk. One of many phrases that sticks with me is: 'Dignity cannot wait for better times'.

https://www.ted.com/talks/alberto_cairo_there_are_no_scraps_of_men



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