

Rehabilitation Research Review

Making Education Easy

Issue 12 – 2010

In this issue:

- *Neurological physiotherapy and hope*
- *Trauma and rehabilitation*
- *Community scheme for stroke survivors*
- *Return-to-work co-ordinator competencies*
- *Cerebral palsy therapy goals: parents' perspectives*
- *Workplace interventions and health outcomes*
- *Traumatic brain injury: a lifelong problem*
- *Internet-based physical activity intervention in RA*
- *Predicting outcome in acute low back pain*
- *Accentuate the positive*

Welcome to the twelfth issue of Rehabilitation Research Review.

There are some interesting takes on rehabilitation amongst the papers that we cover this month. For instance, one examines how neurological physiotherapists view 'hope' – this proves to be a dynamic process that balances reality with dreams and a striving for recovery. Another paper analyses parents' perspectives on physical therapy goal setting for children with cerebral palsy. The rehabilitation process must take these views into account, as well as those goals and perspectives held by the children. Another dynamic and complex process!

Our Vintage Paper dates from 1950, but its message could have been written today. It highlights the need to work with peoples' assets and capabilities, rather than their disabilities. Such an approach is more likely to result in realisation of the opportunities (including economic possibilities) for disabled people, the paper argues.

I hope the issue is of interest and I welcome your comments and feedback.

Kind regards,

Kath McPherson

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

A qualitative study in neurological physiotherapy and hope: Beyond physical improvement

Authors: Soundy A et al

Summary: These researchers explored the meaning of hope in neurological physiotherapy practice. Nine female physiotherapists participated individually in one-off semi-structured interviews. Content analysis uncovered five main themes that coded the most common kinds of hope used and offered by the physiotherapists when working with people with neurological disease: 1) Realistic Hope, 2) False Hope, 3) Accepting Hope and No Need to Hope, 4) Hope in Faith, and 5) No Hope. The researchers note that neurological experience with patients in physiotherapy provides stories that relate to hope and this informs the way they understand it. When considering therapeutic outcome, the physiotherapists recognised the need for having a realistic hope and the danger of having a false hope. However, both were balanced with the need to accept that the unknown was possible and not limiting this or losing their dream. Appreciating that the physical recovery is often unknown encouraged an emphasis on hope in other areas of life. The researchers describe this as a dynamic process of working with different kinds of hope in relation to people with neurological disease; of finding hope in levels or other aspects of life and in both the psychological and spiritual recovery.

Comment: It is probably clear that one of the many things I'm fascinated by is how we help people maintain hope and prevent hopelessness in the face of the very real challenges that injury and illness bring. I was tempted to think about this again lately, having had numerous discussions with people about their brain injury. I was struck by how many said almost verbatim, 'once you have a brain injury – you have a brain injury for life'. Whilst on the one hand this is true with for many the consequences being indeed life-long, it did make me wonder about the power of such statements/language. In view of ever-increasing evidence about neural plasticity and the potential for ongoing improvement, maybe a different statement that has a bit more hopefulness is warranted. It's not about encouraging false hope, but preventing loss of hope which seems so integral to living a meaningful life.

Reference: *Physiother Theory Pract* 2010;26(2):79-88.

<http://www.ingentaconnect.com/content/apl/uotp/2010/00000026/00000002/art00002>



PREVENTION. CARE. RECOVERY.

Te Kaporeihana Āwhina Hunga Whara

Rehabilitation focused on returning to productive life

For more information, please go to <http://www.acc.co.nz>

www.researchreview.co.nz

a RESEARCH REVIEW publication

Motor rehabilitation after stroke, traumatic brain, and spinal cord injury: common denominators within recent clinical trials

Authors: Dobkin BH

Summary: The author of this review suggests that we may gain greater insights from basic and clinical studies if we work across disease platforms to harness findings relevant to the neuroplasticity that follows and can be induced after stroke, traumatic brain injury, and spinal cord injury. The paper points out that clinical rehabilitation trials that address concepts of neuroplasticity to improve motor control and related outcomes share many complex requirements, regardless of the neurological disease. The paper recommends that if investigators develop treatment strategies that focus on key motor impairments and related disabilities, then clinicians in the community may be more likely to adopt evidence-based practices emerging from positive trial results.

Comment: What I liked about this paper was its proposition that some of struggles we have in accumulating evidence about rehabilitation and effective strategies could be addressed if we got over diagnostic boundaries/barriers in research. Whilst there are clearly some things that are specific to one or other diagnostic group – there are also lots of similarities that we are, as yet, unaware of. Whilst this paper explores motor rehabilitation, it may well be that advanced knowledge of use to practice could accumulate if connections were made across the many diagnostic divides in the literature and indeed policy and provision. Interestingly, the call for developing more practical approaches to research methodology was echoed in a recent paper entitled *Heterogeneity is not always noise: lessons from improvement* by Frank Davidoff (in JAMA Vol 302(23) 2580-2586). Sometimes 'noise' is a reality we need to deal with!

Reference: *Curr Opin Neurol* 2009;22(6):563-9.

<http://tinyurl.com/y8pba8v>

Subscribing to Research Review

To subscribe or download previous editions of Research Review publications go to www.researchreview.co.nz

To unsubscribe reply to this email with unsubscribe in the subject line.

A community-based exercise and education scheme for stroke survivors: a randomized controlled trial and economic evaluation

Authors: Harrington R et al

Summary: This paper reports on the evaluation of a community scheme designed to improve integration and well-being for stroke survivors and their families in the south-west of England. Stroke survivors were aged ≥ 50 years at the time of stroke, had returned to living in the community for ≥ 3 months, and felt able to participate in group activities. A total of 124 participants were randomised to standard care and 119 attended the intervention, comprising twice-weekly exercise and education schemes over 8 weeks, facilitated by volunteers and qualified exercise instructors (supported by a physiotherapist), each with nine participants plus carers or family members. The intervention was more successful than standard care in improving physical integration, according to the physical component of the Subjective Index of Physical and Social Outcome scale at 9 weeks (median [95% confidence interval (CI)], 1 [0, 2]; $p=0.022$); this improvement was maintained at 1 year (0 [–1, 2]; $p=0.024$). The intervention also showed a greater improvement at 6 months for the psychological component of WHOQoL-Bref (6.2 [–0.1, 9.1]; $p=0.011$). Mean cost per patient was higher in the intervention group. Excluding inpatient care, the cost difference was £296 (95% CI: –£321 to £913).

Comment: Although not clear from the abstract, the participants in this study were at least three months post stroke and living in the community. So – 'standard care' might well have been very little. Whilst one might query whether the difference in WHOQoL was significant (if confidence intervals cross zero it means a 'zero difference' is possibly the real finding), it is pretty close with the lower CI bound being just below that mark. But there is no doubting that the SIPSO reveals a significant difference that is maintained over a year. The fact that the service was only marginally more costly than 'standard care' is of course in part because volunteers played such a key role in the service initiative. So two lessons – stroke services such as this have very real potential to make a difference and, well-supported volunteers can be a key resource in rehabilitation.

Reference: *Clin Rehabil* 2010;24(1):3-15.

<http://cre.sagepub.com/cgi/content/abstract/24/1/3>

Researcher perspectives on competencies of return-to-work coordinators

Authors: Gardner BT et al

Summary: This study sought to clarify the key role of return-to-work (RTW) co-ordinators across a wide variety of RTW programmes. Twelve principal investigators participated in semi-structured interviews intended to obtain detailed information about the RTW coordinator role and competencies (knowledge, skills, and attitudes) required to achieve optimal RTW outcomes in injured workers. All investigators strongly endorsed the role of RTW coordinator as key to the programme's success. Affinity mapping identified 10 groups of essential competencies: (1) individual traits/qualities, (2) relevant knowledge base, (3) RTW focus and attitude, (4) organisational/administrative skills, (5) assessment skills, (6) communication skills, (7) interpersonal relationship skills, (8) conflict resolution skills, (9) problem-solving skills, and (10) RTW facilitation skills. Within each affinity group, specific competencies were identified, several of which differed based on the scope and the work setting of the RTW intervention.

Comment: My initial reaction was 'hmmm, researchers doing research on researchers' views...?' and I was a little sceptical. But – this was a useful technique and has produced a useful paper. I suspect the themes outlined will resonate with a lot of people who work in the field and it is one of many recent projects identifying both the necessity and complexity of RTW coordinators' roles. Undoubtedly, there are some good options for training in these areas (a number of organisations/universities including ours run such postgraduate programmes), but I think the reference to the need for ongoing mentoring over and above one-off courses is definitely worth considering.

Reference: *Disabil Rehabil* 2010;32(1):72-8.

<http://www.ingentaconnect.com/content/apl/tids/2010/00000032/00000001/art00009>



PHARMACY GUILD OF NEW ZEALAND (JNC)



Registration Now Open

www.musculoskeletal.co.nz

Registered provider RNZCGP CME

Spine in Action: Low Back Pain Can Chronicity be Prevented?

New Zealand Association Musculoskeletal Medicine

DATE: Friday 26th to Tuesday 30th March 2010

VENUE: Rendezvous Hotel Auckland, Mayoral Drive Auckland City NZ

Parents' perspectives on occupational therapy and physical therapy goals for children with cerebral palsy

Authors: Wiart L et al

Summary: Paediatric rehabilitation emphasises functional goals for children with disabilities and use of a collaborative goal-setting process grounded in principles of family-centred service delivery. These researchers set out to explore parents' goals regarding occupational and physical therapy and their experiences with therapy goal-setting processes. They conducted 11 focus groups and two individual interviews with 39 parents of children with cerebral palsy living in western Canada. An inductive, thematic analysis identified 5 themes that provide insights into parents' perspectives on goal setting for their children: (1) movement as the means to functional success; (2) physical health and fitness are important therapy goals; (3) the importance of leading happy, fulfilling lives and being accepted by others; (4) 'We can't do it all': balancing therapy with the demands of everyday life; and (5) shifting roles and responsibilities in goal setting.

Comment: Yes – OK – another passion of mine is goal setting and this year will see me actively seeking out papers to tell you about. I think this article is interesting in a number of ways. First, it starts out reporting that 'functional' goals are emphasised in the literature but then goes on to list that three of their five themes of importance to family members around goal setting is anything but to do with function. It can be a challenge for us to think that goals around therapy / rehabilitation need to 'fit' with family life. Conversely, one might query whether goals that don't fit within the context of someone's life (and for children this clearly includes parents) are more likely to add to the stress in a family? However – the flip side of this is how to ensure steps are taken to maintain a focus on children's own goals even if they differ or challenge families. Hmm... did anyone say rehabilitation is complex?

Reference: *Disabil Rehabil* 2010;32(3):248-58.

<http://informahealthcare.com/doi/abs/10.3109/09638280903095890>

Workplace interventions for preventing work disability

Authors: van Oostrom SH et al

Summary: This review aimed to determine the effectiveness of workplace interventions compared to usual care or clinical interventions on work-related outcomes and health outcomes; and to evaluate whether the effects differ between different types of work disabilities. Data were analysed from 6 randomised controlled trials (749 workers) of workplace interventions aimed at return to work for workers where absence from work because of sickness was reported as a continuous outcome. Three trials involved low back pain, one involved upper-extremity disorders, one involved musculoskeletal disorders, and one involved adjustment disorders. Five studies were rated as having low risk of bias for the sickness absence outcome. Moderate-quality evidence supported the use of workplace interventions to reduce sickness absence among workers with musculoskeletal disorders when compared to usual care, but these interventions were not effective at improving health outcomes. The paucity of data meant that no conclusions could be drawn regarding interventions for people with mental health problems and other health conditions.

Comment: It's really good to see an increasing number of Cochrane reviews relevant to rehabilitation, this being one of a number this particular team has done concerning return to work strategies. On the one hand, it is good to know 'in work' rehabilitation is effective in reducing sick leave. I guess the evidence most of us would want to see is how best to ensure that reductions in time off work are accompanied by improved health and functioning (currently not shown). The reality is we need bigger, better studies and these don't come cheaply – but then neither does long-term work disability.

Reference: *Cochrane Database Syst Rev* 2009 Apr 15;(2):CD006955.

<http://www.cochrane.org/reviews/en/ab006955.html>

Educational, vocational, psychosocial, and quality-of-life outcomes for adult survivors of childhood traumatic brain injury

Authors: Anderson V et al

Summary: These researchers examined long-term outcomes from child traumatic brain injury (TBI) and relevance of injury severity in 124 adult survivors of childhood TBI (aged 18–30 years at evaluation), with injury on average 13.7 years prior to evaluation divided according to injury severity: mild (n=60), moderate (n=27), and severe (n=37). Questionnaires that assessed educational and employment status, psychosocial function, and quality-of-life issues, identified that functional difficulties persisted into adulthood. Injury severity strongly predicted long-term outcomes; environmental factors played a much smaller role. Survivors of severe TBI demonstrated global impairment: poorer school performance, employment difficulties, poor quality of life, and increased risk of mental health problems. Mild and moderate TBI were more benign, although they involved lower educational attainment and employment status, and moderate TBI was associated with late developing mental health issues.

Comment: I'm conscious that in another commentary in this issue I queried the phrase 'once you have a brain injury – you have a brain injury for life'. Well, this is certainly one paper that reiterates how long lasting and wide ranging the consequences can be, particularly for children, even if the injury is classified as mild. However – the key message I think that comes through is not that the 'brain is injured for life' but that rehabilitation needs to have a developmental approach. That is – it needs to be timed to connect and reconnect with people at times of developmental change and challenge. We need no further evidence of the need for this – just more evidence of exactly what is needed at the different stages of development to help people achieve their potential adaptation and recovery.

Reference: *J Head Trauma Rehabil* 2009;24(5):303-12.

<http://tinyurl.com/vjyjb38>



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.

Research Review publications are intended for New Zealand health professionals.

NZSP
2010
Conference

Working together
research & practice

Waipuna Hotel & Conference Centre, Auckland 14 -16 May 2010



PREVENTION. CARE. RECOVERY.

Te Kaporeihana Āwhina Hunga Whara

Committed to improving sustainable rehabilitation outcomes for all clients

Maintenance of physical activity after Internet-based physical activity interventions in patients with rheumatoid arthritis

Authors: Hurkmans EJ et al

Summary: This study evaluated maintenance of physical activity levels 12 months after patients with rheumatoid arthritis (RA) had completed two 1-year Internet-based physical activity interventions, comprising a general training (GT) programme, in which patients received general information on physical activity via a web site and e-mail, or an individualised training (IT) programme delivering individual guidance via a web site and e-mail, a bicycle ergometer and group contacts. Of 152 patients who completed the initial study, 110 (72%) were available at follow-up. At 24 months, significantly more patients were physically active at a moderate intensity level than at baseline in both groups (19% in the IT group and 24% in the GT group; $p=0.366$); the between-group difference was not significant ($p=0.366$). At 24 months, a significant increase from baseline in the proportion of patients meeting the vigorous physical activity level was found only in the IT group (7%; $p<0.05$), not in the GT group (2%; $p=0.317$). No significant between-group differences were observed for functional ability or QoL. However, the RAQoL score was significantly lower in the IT group at 24 months than at baseline; no such change occurred in the GT group.

Comment: I was interested in this study because Internet and mobile phone interventions are certainly attractive in relation to resources being comparatively cheap for widescale application. The abstract states that the QoL scores on the RAQoL are *higher* at 24 months in the IT group which confused me as in this measure, the higher the score, the worse the QoL. So I dug out the full paper to check and indeed, the scores were *lower* for the IT group indicating better QoL at 24 months with no similar change for the general group. So, again, two lessons from this paper: a) individualised training utilising internet based contact is worth exploring and b) abstracts can be wrong!

Reference: *Rheumatology (Oxford) 2010;49(1):167-72.*

<http://rheumatology.oxfordjournals.org/cgi/content/abstract/49/1/167>

Predicting outcome in acute low back pain using different models of patient profiling

Authors: Wand BM et al

Summary: This secondary analysis of a randomised, controlled trial of physiotherapy care for acute low back pain (ALBP) sought to determine which patient profile provides the most useful information about long-term outcome in ALBP. This analysis reports data for 54 ALBP patients. Three clinical profiles were developed from clinical, psychological, and demographic data collected at baseline and at 6 weeks, and the change in status between these 2 time points. None of the baseline variables predicted long-term disability; the baseline profile predicted long-term pain only. The 6-week profile predicted both long-term pain and disability. The change profile only predicted long-term disability. The paper details the variance between clinical features predicting chronic pain and disability and notes the difference in explanatory power.

Comment: The ability to predict which individual patients will do well or badly is a very different thing to using epidemiological data to predict outcomes for an overall population. For a moment I got very interested as I thought maybe this paper would address individual prediction but sadly not. Not surprising really, as the whole field of individualised medicine/healthcare is a pretty complex business. But also – the abstract didn't give any data about the degree of accuracy in prediction, only the probability of the explanatory model resulting by chance (this being less than 20% at $p<0.05$ and less than 10% if $p<0.001$). On getting the full paper, you can see that the model explained 60% of the variance in long-term disability on the Roland Morris Disability Questionnaire. Sadly – the model was very complicated (so not a quick assessment) and of course it leaves 40% of the variance unexplained meaning individual prediction of who will experience long-term disability or who would benefit from early rehabilitation is still pretty inaccurate.

Reference: *Spine 2009;34(18):1970-5.*

<http://tinyurl.com/yzdkd5o>

VINTAGE PAPER

Work evaluation in rehabilitation

Authors: Stevens AL

Summary: This paper takes the position that rehabilitation should be about teaching and guiding individuals to make the most of their existing physical assets; that they should be judged in terms of their assets and not their liabilities. The paper makes the point that if these assets are not affected by the disability, it is hard to justify their not being used economically. It is important to first determine the capabilities of a worker and then direct the person's interest – this ensures proper placement of the worker, argues the paper. It advocates that the person undertake a period of training and adjustment to disability as a means of assessing capabilities, rather than relying on the outcomes of standardised psychometric testing, which may simply pigeonhole a person and not be able to prove what a person is capable of. An example is given of a US-based work assessment programme by which an individual's capabilities and interests are discovered and become employable.

Comment: Every decade has its highs and lows and for the 1950s, a new high for me has to be Anne L Stevens. OK – maybe a few other things come from that era including invention of the telephone answering machines and the oral contraceptive and, the first production of superglue and the non-stick pan. Whilst Anne's paper is clearly linked to its period in some ways (only men seem to be workers), in other ways it's a reminder of how little we have 'proven' in 60 years. She describes how important it is that an individual's capabilities and interests are recognised, that focusing on strengths rather than deficits is more likely to engage those who actually need rehabilitation services, the importance of 'proper' placements (i.e. those that fit and where the contribution is meaningful) and – that standardised measures have their place but also their weakness. *History Never Repeats* may have been a good song but – the evidence? ☺

Reference: *Occup Ther Rehabil 1950;29(3):157-61*

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.

Privacy Policy: Research Review will record your email details on a secure database and will not release it to anyone without your prior approval. Research Review and you have the right to inspect, update or delete your details at any time.

COMING SOON

Pain Management Research Review

CLICK HERE to subscribe

Stretch your specialist rehabilitation knowledge

REHABILITATION

POSTGRADUATE HEALTH SCIENCES

AUT UNIVERSITY

WWW.AUTHEALTH.AC.NZ | 0800 AUT UNI (0800 288 864)

For more information, please go to <http://www.authealth.ac.nz>

© 2010 RESEARCH REVIEW