

Rehabilitation RESEARCH REVIEW™

Making Education Easy

Issue 67 – 2024

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Abbreviation used in this issue

CI = confidence interval
ICU = intensive care unit
LBP = low back pain
TBI = traumatic brain injury

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Welcome to issue 67 of Rehabilitation Research Review.

We begin this issue with a six-session telephone-delivered intervention aimed at increasing the knowledge, confidence and skills to manage one's health in patients with chronic pain. In an Australian study, an exercise buddy-assisted intervention was well tolerated in patients with chronic low back pain. We conclude this issue with a prospective European study showing that early individualised integrated rehabilitation is associated with a lower prevalence of fatigue in patients with breast cancer.

I hope that you find the information in this issue useful in your practice and I welcome your comments and feedback.

Kind regards,

Professor Nicola Kayes

nicolakayes@researchreview.co.nz

Communication and activation in pain to enhance relationships and treat pain with equity (COOPERATE): A randomized clinical trial

Authors: Matthias MS et al.

Summary: The randomised controlled Communication and Activation in Pain to Enhance Relationships and Treat Pain with Equity trial involved a six-session telephone-delivered intervention to increase patient activation (i.e., having the knowledge, confidence, and skills to manage one's health) in 250 Black patients with chronic pain. Patients were identified from a Midwestern Veterans Affairs medical centre and underwent either the intervention or attention control. The activation group experienced a 4.6-point increase in activation from baseline to 3 months versus a 0.13-point increase in controls ($p = 0.03$), and the improvements in the intervention group were sustained at 6 and 9 months (7- and 5.77-point improvements from baseline, respectively, both significant vs controls). Communication self-efficacy (secondary outcome) also increased significantly in the activation group at 3 months versus controls.

Comment: At face value, I was a little worried about a focus on an individual-level intervention as a means of addressing equity (versus a focus on the structural and systemic factors which perpetuate inequities). However, the authors set the context well and do position their work within that broader context. For clarification, COOPERATE sessions focused on two domains including: goal clarification and prioritisation; and communication with clinicians. The findings were promising with improvements in patient activation compared to controls. However, I will admit that I am tentative about the privileging of patient activation as a key outcome, particularly in the context of equity-oriented work. It is not that I don't see the value in outcomes like patient activation and self-management. My concern is that (in isolation) we can sometimes use these as tools to put the onus on patients and relieve ourselves (clinicians and the system) of responsibility. Further, independence tends to be celebrated, while interdependence – which may be more relevant in the context of a collectivist culture – is villainised. In contrast, there is growing evidence for alternatives such as supported self-management and relational autonomy, which more explicitly attend to the social and relational aspects of managing life in the context of chronic pain. I would add, the paper from Antunovich et al., (also reviewed in this issue of Rehabilitation Research Review) challenges some of the fundamental assumptions we might have about what "activation" might look like in the context of tino rangatiratanga and self-determination.

Reference: *Pain* 2024;165(2):365-375

[Abstract](#)

Independent commentary by Professor Nicola Kayes

Professor Nicola Kayes is Associate Dean of Research in the Faculty of Health and Environmental Sciences and Co-Director of the Centre for Person Centred Research at Auckland University of Technology. Nicola has a background in health psychology and as such her research predominantly explores the intersection between health psychology and rehabilitation. She is interested in exploring the role of the rehabilitation practitioner and their way of working as an influencing factor in rehabilitation and whether shifting practice and the way we work with people can optimise rehabilitation outcomes. Nicola actively contributes to postgraduate teaching in rehabilitation in the School of Clinical Sciences at Auckland University of Technology.





Health coaching intervention with or without the support of an exercise buddy to increase physical activity of people with chronic low back pain compared to usual care: A feasibility and pilot randomised controlled trial

Authors: Fritsch CG et al.

Summary: These authors explored the feasibility of a health coaching intervention with or without the support of an exercise buddy to increase physical activity of people with chronic low back pain compared to usual care. They also investigated recruitment and data collection approaches. A total of 30 adults discharged from low back pain treatment were randomised to buddy-assisted (health coaching intervention with exercise buddy's support), individual-only (health coaching only), or usual care groups and data collected at baseline, 3 and 6 months. The analysis revealed that recruitment and baseline data completion were acceptable (>70% recruitment and ≤20% missing data), but data collection and follow-up rates post-randomisation were not. However, the buddy-assisted intervention was well-accepted with 85% of the buddy-assisted group reporting that the buddies helped them to increase physical activity and that they would recommend the intervention. Furthermore, 70% of the individual-only and control groups believed exercise buddies would help them improve their activity levels.

Comment: The authors of this research cited past trials which found no effect for the impact of health coaching on physical activity participation. They argued for the role of social support as an enabling factor, and the potential for an exercise buddy to overcome barriers to exercise. This research was therefore seeking to test the feasibility of an intervention which combined health coaching with an exercise buddy. There was flexibility embedded into the intervention with participants selecting their buddy of choice and selecting their preferred type of physical activity. It is worth noting that this research was carried out in the context of COVID restrictions which meant the intervention protocol had to be modified so that buddies exercised together online, or independently on the day and time agreed. Nonetheless, feedback was positive. While there were some feasibility issues identified which would need to be ironed out, the findings suggest it is worth proceeding to a definitive trial. However, I am not sure I would wait for that – I would argue there is sufficient evidence across a range of conditions and context for the role of social support in supporting health behaviour change. While evidence is needed to consider in what form, and for whom social support might be most effective, I would suggest routinely supporting the involvement of an exercise buddy is more likely to augment engagement than cause harm – so why wait?

Reference: *Musculoskelet Sci Pract.* 2024;71:102941

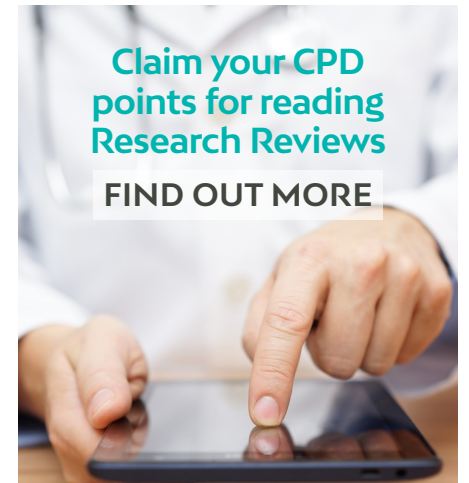
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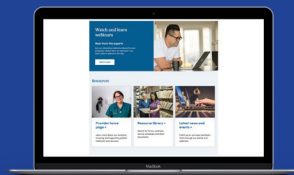
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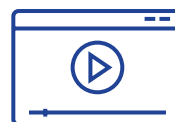
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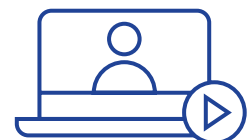
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Valued living after mild traumatic brain injury: Characteristics and relationship with outcomes

Authors: Faulkner JW et al.

Summary: This analysis involving 56 participants with a mild traumatic brain injury (mTBI) aimed to characterise valued living in mTBI and explored its relationship with mTBI and mental health outcomes. Participants completed data on self-report measures including pre-injury mental health and other demographic and injury-related variables, valued living, post-concussion symptoms, functional disability, and stress, anxiety and depression before engaging in a psychological intervention. A significant association was seen between a pre-injury mental health condition and valued living, and valued living was found to be uniquely associated with depression after mTBI ($\beta = -0.08$, $p = 0.05$); however, there was no association observed with post-concussion symptoms, functional disability, stress or anxiety ($p > 0.05$).

Comment: This research joins a growing body of research exploring valued living in TBI more generally (e.g., Pais C et al., [Neuropsychol Rehabil. 2019;29\(4\):625-37](#); Sathananthan N et al., [Neuropsychol Rehabil. 2022;32\(8\):2170-202](#)). "Valued living" refers to the extent to which a person's actions are consistent with their values and has been associated with positive outcomes in several conditions. Given that brain injury can result in a loss of valued life roles and can have transformative effects for one's sense of self and identity, there is a strong argument for integrating values-based approaches into brain injury rehabilitation. This research set out to explore a range of questions to examine valued living in mTBI as a specific subgroup whose unique presentation and needs warrant more specific exploration. It is important to note, however, when interpreting these findings that the sample was limited to those seeking psychological support following mTBI. A key goal of this work (other than examining the relationship between valued living and mental health outcomes) was to characterise valued living in this subgroup. They found the greatest difference between values and actions were in the recreation, physical, employment and friendships/social relations domains. Further research is warranted to unpack the findings of this research, as well as to address identified limitations in measurement tools. Nonetheless, when one pauses to consider the impact of not feeling able to engage in ways that matter, in things that matter, it is not so hard to see why valued living might be an important target for therapeutic activities. Watch this space!

Reference: *Neuropsychol Rehabil.* 2024;Mar 18 [Epub ahead of print]

[Abstract](#)

Current practice, guideline adherence, and barriers to implementation for Achilles tendinopathy rehabilitation: A survey of physical therapists and people with Achilles tendinopathy

Authors: Merry K et al.

Summary: These authors explored clinical practice patterns of physical therapists who treat individuals with Achilles tendinopathy and aimed to identify perceived barriers and facilitators for prescribing and engaging with therapeutic exercise. Both physical therapists ($n = 341$) and individuals with Achilles tendinopathy ($n = 74$) completed an electronic cross-sectional survey, answering questions about their physical therapy training and current practice (therapists), injury history and management (patients), and perceived barriers and facilitators (therapists and patients). Aligned with clinical practice guidelines, over 94% of the physical therapists surveyed prioritise patient education and therapeutic exercise. Barriers to prescribing therapeutic exercise by physical therapists were: patient compliance, patient knowledge, and the slow nature of recovery. Barriers for patients engaging with therapeutic exercise were: time, physical resources, and a perceived lack of short-term treatment effectiveness.

Comment: This research sought to explore several aspects relevant to the management of Achilles tendinopathy. This includes examining alignment with clinical practice guidelines, exploring barriers and facilitators to prescribing therapeutic exercise (for physiotherapists), and exploring barriers and facilitators for engaging with therapeutic exercise (for patients). So, it is trying to do a lot and broadly explore the behavioural influences for both professionals and patients. That means there is a lot to unpack and take in. If you do take the time to engage with the paper in full, there is a good example provided (see figure 1 in the paper) which shows how the authors have taken the findings regarding barriers and facilitators identified by patients and drawn on the COM-B model and behaviour change wheel to identify tailored behaviour change techniques that physiotherapists could incorporate into practice.

Reference: *BMJ Open Sport Exerc Med.* 2024;10(1):e001678

[Abstract](#)



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'Physical well-being is our top priority': Healthcare professionals' challenges in supporting psychosocial well-being in stroke services

Authors: Bright FAS et al.

Summary: In this study, 28 health professionals across multiple disciplines working in stroke services (acute and rehabilitation) throughout New Zealand were interviewed with an aim to understand how health professionals address well-being, and to examine how the practice context influences care practice in individuals following a stroke. Analysis revealed that health professionals are managing multiple lines of work in stroke care: biomedical work of investigation, intervention and prevention; clinical work of assessment, monitoring and treatment; and moving people through service. While supporting well-being was a priority, participants reported that this could be deprioritised amidst the time-oriented pressures of the other lines of work that were privileged within services. They felt that well-being could become unsupported and invisible. The authors concluded that health professionals are not provided with the knowledge, skills, time or culture of care that enable them to privilege well-being within their work, with clear implications for those with stroke, as well as the well-being of health professionals themselves.

Comment: This paper provides a useful and nuanced analysis of the lines of work that are valued and legitimised, often at the expense of well-being work, in stroke care. Alongside this, it offers insights into the structural, professional and organisational contexts that shape stroke care and make these lines of work possible. In their discussion, the authors note: "The prevailing culture of stroke care makes it challenging to support well-being, and it is unsurprising that well-being is not prioritised. However, we posit that the status quo is deeply problematic for health professionals and for people with stroke". They offer some practical suggestions for short-term solutions to address this. However, they also rightly note that short-term solutions which are inevitably focused at a practice level are not sufficient on their own. Rather, systemic change is necessary. I would be interested to know how much these findings resonate – not just for professionals working in stroke services in Aotearoa New Zealand, but for those working in other rehabilitation services. I suspect that the deprioritisation of well-being work in the context of other competing demands is not isolated to stroke services, but rather is a systemic issue across rehabilitation services more generally – at least in the public sector? If so, then how might we collectively advocate for the systemic change that is needed to better meet the well-being needs of people accessing rehabilitation?

Reference: *Health Expect.* 2024;27(2):e14016

[Abstract](#)

Telerehabilitation consultations with a physiotherapist for chronic knee pain versus in-person consultations in Australia: The PEAK non-inferiority randomised controlled trial

Authors: Hinman RS et al.

Summary: This Australian non-inferiority, randomised controlled trial aimed to determine if physiotherapy video conferencing consultations were non-inferior to in-person consultations for chronic knee pain consistent with osteoarthritis. A total of 15 primary care physiotherapists were recruited from Australian clinics and 204 patients identified and allocated to in-person care and 190 to telerehabilitation. All patients received five consultations over 3 months for strengthening, physical activity, and education. At 3-month follow-up, both in-person and telerehabilitation treatment recipients reported improved knee pain and function (numerical rating scale mean change 2.98 vs 3.14, and Western Ontario and McMaster Universities osteoarthritis index 10.20 vs 10.75, respectively). For both pain and function, telerehabilitation was found to be non-inferior to in-person consultation (mean difference 0.16; 95% CI -0.26 to 0.57, and 1.65; 95% CI -0.23 to 3.53, respectively). The rates of adverse events were similar between groups (21% for in-person care and 19% for telerehabilitation) and none of the events were serious.

Comment: This is a non-inferiority trial. This means that they are not looking to see if telerehabilitation is *more* effective than in-person consultations, but rather whether telerehabilitation is *at least as* effective as in-person consultations. This is important as uptake of telerehabilitation is often hindered by the assumption that in-person is more effective. The findings of this research certainly dispel that myth (at least in the context of telerehabilitation for people with chronic knee pain). It is important to highlight what supports and resources were put in place to support both physiotherapists and patients to engage with telerehabilitation. For example – all clinicians took part in training which included video conferencing practice consultations and a competency video conferencing evaluation; while patients were posted a consultation information booklet including guidance on downloading Zoom, etc. I think we shouldn't underestimate the importance of scaffolding people into telerehabilitation rather than assuming you can just mimic what occurs in in-person consultations. I suspect the approach taken in this research was important to their non-inferiority finding.

Reference: *Lancet* 2024;403(10433):1267-1278

[Abstract](#)

The lived experience of chronic pain for Māori: How can this inform service delivery and clinical practice? A systematic review and qualitative synthesis

Authors: Antunovich D et al.

Summary: This systematic review and qualitative synthesis identified literature describing experiences of chronic pain and pain management for Māori, with an aim to understand how this experience could inform service delivery and clinical practice. Seven studies were included and thematic analysis identified the following three themes as encapsulating the data: "1) a multidimensional view of pain and pain management: Māori expressed a holistic and integrated understanding of the multiple factors that influence pain and its management, 2) a responsibility: respectful tikanga-informed care: the experiences of Māori participants with healthcare highlight a need for antiracist approaches, and a clinical responsibility to practice manaakitanga and tikanga, and 3) tino rangatiratanga: a desire for knowledge, choice and autonomy in pain management: Māori valued the empowering nature of knowledge about pain, and information and support to make decisions about treatment, including considerations regarding Western and traditional Māori medicine".

Comment: At face value, it can be easy to dismiss findings which emphasise the multidimensional nature of pain. After all, I think most people working in pain would say that pain has long been understood as multidimensional. However, I would suggest that we are (mostly) still constrained by western-centric perspectives of multidimensionality, with the biopsychosocial model of pain being most commonly deployed. The findings in this paper offer a more nuanced understanding of multidimensionality as it relates to Māori experiences of pain. For Māori – spiritual, cultural, whānau, relational, emotional, environmental, historic, and intergenerational factors were perceived as inherently connected to both the experience of pain and outcomes perceived to be most important in the management of pain. This is just one of several important findings offered in this paper. Ideally, all professionals, service providers, funders, and policy makers working in, or influencing, pain management services in Aotearoa New Zealand should read this paper and critically reflect on implications for their practice. The authors include some practical examples of how services might respond in the form of clinical recommendations which is a great starting point.

Reference: *N Z Med J.* 2024;137(1591):62-73

[Abstract](#)



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Variation in care and outcomes for people after hip fracture with and without cognitive impairment; Results from the Australian and New Zealand Hip Fracture Registry

Authors: Taylor ME et al.

Summary: This retrospective cohort study using Australian and New Zealand Hip Fracture Registry data on 49,063 people ≥ 50 years of age who underwent hip fracture surgery aimed to compare care and outcomes for people with and without cognitive impairment after hip fracture. Overall, those with cognitive impairment experienced worse care and outcomes compared to cognitively healthy older people. Compared with the cognitively health group, significantly fewer cognitively impaired patients had timely pain assessment (≤ 30 min of presentation: 61% vs 68%; $p < 0.0001$), were given the opportunity to mobilise (89% vs 93%; $p < 0.0001$) and achieved day-1 mobility (34% vs 58%; $p < 0.0001$), and a higher percentage experienced delayed pain management (>30 mins of presentation: 26% vs 20%; $p < 0.0001$), were malnourished (27% vs 15%; $p < 0.0001$), had delirium (44% vs 13%; $p < 0.0001$) and developed a new pressure injury (4% vs 3%; $p < 0.0001$). Furthermore, a lower percentage of the cognitively impaired group underwent rehabilitation (35% vs 64%; $p < 0.0001$), particularly patients from residential aged care facilities (16% vs 39%; $p < 0.0001$), or received bone protection medication at discharge (24% vs 27%; $p < 0.0001$). A new transfer to residential care was significantly more common in the cognitively impaired group (46% vs 11%; $p < 0.0001$) and a higher percentage of cognitively impaired patients had died at 30-days' follow-up (7% vs 3% from private residence; 15% vs 10% from residential aged care facility; both $p < 0.0001$).

Comment: First, the authors start this paper by providing useful context i.e., that approximately 30% of all patients admitted to hospital with a hip fracture have an additional diagnosis of cognitive impairment or dementia. This gives a good sense of the size of the problem. In short, it is not a small proportion of people we are talking about here! Second, the findings highlighted several important differences in care processes and outcomes for the cognitively impaired group. In essence, there appears to be inequities in access, experience, and outcomes for the cognitively impaired group. Finally, this research is based on Australian and New Zealand data. So, the findings reflect what has happened on our own doorstep. All things considered – I think we should be concerned about these findings and that we should be taking action to address these inequities. The authors make several tangible recommendations of where to start. If you are working in this setting, I strongly encourage you to reflect on these realities in your service and engage with the authors recommendations as a first step.

Reference: *J Nutr Health Aging* 2024;28(2):100030

[Abstract](#)

Recovery of functional independence following major burn: A systematic review

Authors: Jawad AM et al.

Summary: This systematic review explored factors predicting recovery of independence, the expected rate and time to independence, and the measures of progress used, in majorly burned patients ($>20\%$ total body surface area) aged >15 years. Four databases (MEDLINE, EMBASE, COCHRANE, CINAHL) were searched and 21 eligible studies involving 1298 patients (mean age 39.6 years, mean total body surface area involved 25.8%) were included. Older age, female gender, burn severity, prolonged ICU and hospital admission, preceding mental health conditions, and post-acute psychological issues were identified as the most significant recurring factors impacting recovery of independent function. Benefits were seen, even after 2 years, with exercise-based rehabilitation. Rates of discharge to independent living from hospital ranged from 27% to 97% of patients, and for return to work ranged from 52% to 80%. The most widely used outcome scoring systems were the Burns Specific Health Scale-Brief, Functional Independence Measure, and Physical Composite Score (SF-36).

Comment: I was looking forward to engaging with it as I am mindful that I rarely include papers addressing rehabilitation following major burns in Research Review. However, I admit to being a little disappointed by this paper. I found it a little hard to make sense of – mostly as I am not sure the aims of the review were entirely clear. The abstract indicated a focus on factors predicting recovery, the aims stated in the paper refer to a focus on barriers to recovery, while the data synthesis appeared to focus on functional limitations and outcomes with *some* reference to predictors within each section. Overall, I felt there was a lack of coherence and focus in this paper, making it difficult to draw meaningful conclusions. As such, while the authors conclusions are relatively consistent with what one might intuitively expect, I would promote caution when interpreting these findings. A secondary question included expected rate and time of recovery. However, the findings are so variable across the included studies that it is difficult to draw clear conclusions on that secondary question as well.

Reference: *Burns* 2024;Feb 27 [Epub ahead of print]

[Abstract](#)

Impact of early integrated rehabilitation on fatigue in 600 patients with breast cancer - a prospective study

Authors: Auprih M et al.

Summary: This prospective study investigated whether an integrated rehabilitation programme reduces the prevalence of chronic fatigue compared to simple, non-integrated rehabilitation in 600 patients with breast cancer (mean age 52 years). The integrated rehabilitation group ($n = 277$) received an individualised, multidisciplinary and integrated approach to rehabilitation, while the control group ($n = 301$) received a standard rehabilitation programme. The two groups were similar with regard to age, education, disease extent, surgical procedures, systemic cancer treatment, or radiotherapy, and there were no differences in fatigue before the beginning of treatment. Patients were also referred for additional interventions (e.g., psychologist, gynaecologist, pain management team, physiotherapy, clinical nutrition team, kinesiologist-guided online training, vocational rehabilitation, general practitioner). All patients completed three questionnaires (EORTC QLQ-C30, -BR23 and NCCN) prior to cancer treatment, and at 6 and 12 months. At 6 and 12 months after the start of treatment, the control group exhibited a significantly higher level of constant fatigue than patients in the intervention group ($p = 0.018$ at 6 months; $p = 0.001$ at 12 months) and a higher proportion of patients in the control group experienced significant interference with their usual activities from fatigue than in the intervention group ($p = 0.042$ and $p = 0.001$). The control group were 1.5-fold more likely to be fatigued than the intervention group. The only independent risk factor correlated to fatigue 1 year after the start of treatment was inclusion in the intervention group ($p = 0.044$).

Comment: It would be great to see rehabilitation more routinely integrated across the continuum of cancer care in Aotearoa New Zealand. [Pinc and Steel New Zealand](#) have worked tirelessly over many years to advocate for cancer rehabilitation in New Zealand. However, it is hard to imagine the intervention tested in this research implemented in our context – it appears to be a hugely intensive, multi-component intervention with involvement of a multidisciplinary team of people. Perhaps this level of service provision is something for us to aspire to?

Reference: *Radiol Oncol.* 2024;58(2):243-257

[Abstract](#)

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