

Making Education Easy

Issue 68 - 2024

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Abbreviations used in this issue

a0R = adjusted odds ratio **HR** = hazard ratio

OR = odds ratio

KINDLY SUPPORTED BY:



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Welcome to issue 68 of Rehabilitation Research Review.

An Australian study looking at `My Therapy', a consumer driven, self-management programme designed to increase the dosage of therapy participation during physical rehabilitation, found an increase in daily rehabilitation dosage but failed to show any significant improvement in the Functional Independence Measure. In the Australian WalkBack study, an individualised, progressive walking and education intervention involving six sessions with a physiotherapist over 6 months was found to be effective in preventing an episode of activity-limiting low back pain between 12 and 36 months of follow-up. We conclude this issue with a mixed-methods study investigating the clinical effectiveness of cardiac rehabilitation and barriers to completion in patients of low socioeconomic status in rural areas.

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

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Outcomes of the My Therapy self-management program in people admitted for rehabilitation: A stepped wedge cluster randomized clinical trial

Authors: Brusco NK et al., for the My Therapy Consortium

Summary: This Australian stepped wedge, cluster randomised clinical trial aimed to determine whether the 'My Therapy' self-management programme in addition to routine care improves functional independence relative to routine care alone in patients admitted for physical rehabilitation. The study was conducted over 54 weeks between April 2021 and April 2022 (nine periods of 6-weeks' duration) and included all adults aged ≥18 years admitted for rehabilitation at nine general rehabilitation wards within four hospitals in Victoria. My Therapy comprised a sub-set of exercises and activities implemented in supervised sessions that could be performed safely, without supervision or assistance. A total of 1092 patients received the intervention (mean 21 minutes/day of self-directed therapy) and 1458 comprised the control group, receiving 4 minutes of therapy per day (mean age 77 years; 62% female; 37% orthopaedic diagnosis). No difference was seen between intervention and control participants in the odds of achieving a minimal clinically important difference in the Functional Independence Measure (FIM™; aOR 0.93; 95 % CI 0.65-1.31) nor in change in FIM™ score from admission to discharge (adjusted mean difference -0.27 units; 95 % CI -2.67 to 2.13).

Comment: This paper is one in a series of research being led by the Rehabilitation Ageing and Independent Living Research Centre at Monash University on the My Therapy programme. If you want to find out more about My Therapy, there is a collection of resources and publications available here: https://www.monash.edu/medicine/spahc/rail/my-therapyrehab. In short, My Therapy is a consumer driven, self-management programme designed to increase the dosage of therapy participation during physical rehabilitation. This addresses a known challenge in rehabilitation where therapy dose in adult rehabilitation rarely meets best practice guidance regarding optimal dose. In this trial, personalised My Therapy programmes based on patient goals were developed by occupational therapists and physiotherapists. The prescribed exercises were able to be performed without supervision, but the programme was actively monitored and progressed and there were embedded mechanisms for feedback between patient and clinician throughout. So, in some ways this is a form of supported self-management. Despite an increase in rehabilitation dose under intervention conditions, meaningful change on the FIM™ was not observed. The authors hypothesised that the increased dosage was still not sufficient for therapeutic gain and that limitations in the extent to which My Therapy was implemented as planned on some wards may explain these findings. While FIM™ has some value in an inpatient setting, I wondered if in fact there are other outcomes that may be equally important to look at which may be important following discharge from the inpatient setting. For example, the role that a tool like My Therapy may have in building a belief in one's capability to engage in self-directed rehabilitation activities may be important for longer-term outcomes. Similarly, being practiced in the use of My Therapy may provide an important bridge between inpatient and community rehabilitation services where we routinely see long delays in access to rehabilitation.

Reference: Ann Phys Rehabil Med. 2024;67(8):101867 Abstract

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Authors: Day MA et al.

Summary: This secondary analysis of a three-arm, randomised clinical trial compared the immediate (pre- to -post-treatment) and longer-term (pre-treatment to 3- to 6-month follow-up) effects of three active treatments (cognitive therapy, mindfulness meditation, and behavioural activation) delivered via group videoconference to 302 patients with chronic low back pain. Within each of the active treatment arms, medium to large effect size reductions in pain interference were seen (ds -0.71 to -1.00), and gains were maintained at both follow-up time points. Change in sleep disturbance was the only outcome with a significant between-group difference in means or changes from pre- to post-treatment, and this outcome improved more with behavioural activation than mindfulness meditation (d -0.49).

Comment: The introduction of this paper made an argument for the value of comparing the effects of these three single-component interventions given they are widely used techniques for the management of chronic low back pain and are often combined in multimodal interventions. Interestingly, they found that each individual component was effective in its own right, and the effect sizes were comparable to those observed in multimodal interventions. The authors note these findings may have implications for access to psychological interventions for people with chronic pain i.e., where people may benefit from access to any one of these interventions, rather than being reliant on access to a specific or more complex intervention, and given training and delivery of a single-component intervention may be more feasible in the context of workforce shortages. It is worth noting there were 15 exclusion criteria in this trial! They all seemed legitimate when considering the aims and purpose of the trial. However, I raise it as when we consider transferability of findings to the real world, it is worth knowing who has been excluded and what impact that might have when thinking about application in one's own practice context.

Reference: BMC Med. 2024;22(1):156

Abstract

Until you're in the chair and executing your role, you don't know': A qualitative study of the needs and perspectives of people with stroke-related communication disabilities when returning to vocational activity

Authors: Lanyon L et al.

Summary: This qualitative study using semi-structured interviews investigated the needs and experiences of seven people (five men and two women aged 24-69 years) with communication disability after stroke as they return to work. Specific aims were: (1) investigate the experience of vocational rehabilitation for people with communication disability after stroke; (2) identify gaps; and (3) provide preliminary recommendations for tailored service delivery. The participants had difficulties with auditory comprehension and information processing, thinking, executive function and self-regulation, reading comprehension, and verbal and written expression. Participants perceived vocational rehabilitation to be beneficial, however, they identified gaps including limitations to accessing specialist vocational rehabilitation programmes, limited access to psychological and peer-based support during early rehabilitation, limited preparedness for the degree of impact that their communication changes had on execution of vocational roles and responsibilities, and barriers to accessing ongoing rehabilitation after resumption of vocational activity.

Comment: For context, this research was not a standalone qualitative study. It was undertaken alongside a pilot randomised trial of 'The Work Trial', an early specialist vocational rehabilitation intervention. The trial recruited people with stroke who had return to work goals, including people with communication impairment. This study was a sub-study seeking to explicitly explore the experiences of that sub-group, including their experiences of the strategies implemented to support their participation. Participants had access to a variety of intervention components including physical, cognitive and speech rehabilitation, vocational preparation and processes, and psychological interventions. Overall, the findings are perhaps not new — they highlight complexities and gaps that other research has uncovered, including the need for more psychological support, the importance of connecting rehabilitation activities to long-term vocational goals, the potential for flexible mode of delivery (integrating in-person and telerehabilitation) to respond to people and context, and the need for structural and tailored vocational supports, which attend to the persons unique communicative ability. The following key question remains: How can we more routinely and effectively integrate these features into vocational rehabilitation interventions?

Reference: Int J Lang Commun Disord. 2024; Aug 24 [Epub ahead of print]



Effectiveness and cost-effectiveness of an individualised, progressive walking and education intervention for the prevention of low back pain recurrence in Australia (WalkBack): A randomised controlled trial

Authors: Pocovi NC et al.

Summary: The two-armed, Australian randomised controlled WalkBack study aimed to investigate the clinical and cost-effectiveness of an individualised, progressive walking and education intervention to prevent the recurrence of low back pain. The study recruited adults (aged \geq 18 years) who had recently recovered from an episode of non-specific low back pain of ≥24 hours duration, that was not attributed to a specific diagnosis. Participants (mean age 54 years; 81% female) took part in an individualised, progressive walking and education intervention involving six sessions with a physiotherapist over 6 months (n = 351) or received no such treatment (controls; n = 350). The intervention was found to be effective in preventing an episode of activity-limiting low back pain between 12 and 36 months of follow-up (HR 0.72; 95% CI 0.60-0.85; p = 0.0002), with a median of 208 and 112 days to recurrence in the intervention and control groups, respectively. Cost-effectiveness, evaluated from the societal perspective and expressed as incremental cost per quality-adjusted life-year (QALY) gained was found to be AU\$7802, with a 94% probability that the intervention was cost-effective at a willingness-topay threshold of \$28,000.

Comment: The authors make the point that existing exercise-based interventions have tended to be highcost and high-burden. They propose a walking-based intervention is a low-cost intervention accessible to everyone. However, while the health benefits of walking are well recognised, there is limited research exploring walking as a mechanism for preventing recurrences of low back pain. The findings were positive - both in terms of effect, and in terms of cost-effectiveness. Note that people were excluded if they already engaged in regular exercise. In this case, the intervention consisted of: a six month individually tailored walking programme, a target to walk five times per week for at least 30 minutes daily, and six coaching sessions with a physiotherapist (five of these sessions taking place over the first three months). It is worth reading the paper in full for a more detailed overview of what the coaching sessions entailed. Overall, this intervention seems promising.

Reference: Lancet 2024;404(10448):134-144Abstract

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Unpacking how trust, communication and flow interact to sustain quality relationships between disabled people, family and support workers: A realist qualitative study

Authors: Bourke J et al.

Summary: These authors examined the intricate interplay of context and mechanisms that drive positive relationship outcomes for disabled people (n=5), their family members (n=5), and disability support workers (n=6) using a realist-informed, participatory methodology. Two workshops per group were undertaken and all three groups prioritised three key generative mechanism processes involved in positive relationship outcomes: (1) having clear communication; (2) building trust; and (3) developing a sense of flow. The authors describe how each mechanism manifested in a unique way for each group, and how the activation of each mechanism was influenced by a dynamic resources/tensions balance that was specific to each group.

Comment: This is an excellent paper, focused on an important topic. Just engaging with the high-level processes (e.g., clear communication, building trust, etc.) doesn't do it justice. The analysis is unique compared to other studies I have engaged with on this topic in that it does not privilege the perspective of any one party. Rather, it examines how contexts, mechanisms and outcomes interplay for each party (i.e., disabled person, their family members, and their support workers). The findings are nuanced and insightful. In reading them, I am reminded of the Senses Framework (https://meaningfulcarematters.com/ wp-content/uploads/2021/06/SENSES-Framework.pdf) developed in the United Kingdom which I have always been quite taken with which argues that good care can only be delivered when all parties experience a sense of security, purpose, belonging, etc. The findings from this paper also have a high level of practical utility as they make visible key resources (interventions, strategies, supports, processes), which could be strengthened to support positive relationships between support workers, disabled people and family members. In summary, this paper is well worth a read!

Reference: Disabil Rehabil. 2024;Aug 12 [Epub ahead of print]
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. For full bio CLICK HERE.

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Rehabilitation after surgery for hip fracture – the impact of prompt, frequent and mobilisation-focused physiotherapy on discharge outcomes: An observational cohort study

Authors: Siminiuc D et al.

Summary: This cohort study examined the relationship between post-operative physiotherapy activities (time to first walk, activity the day after surgery, physiotherapy frequency), and hospital length of stay (LOS) and discharge in 437 hip fracture surgery patients (62% female, 56% aged ≥85 years, 23% from residential aged care facilities, 48% with a gait aid, 38% cognitively impaired) included in the Australian and New Zealand Hip Fracture Registry Acute Rehabilitation Sprint Audit. Median acute and total LOS were 8 and 20 days, respectively. Approximately 71% of patients from private residences returned home and 29% were discharged to a residential aged care facility. If previously mobile patients walked on day 2-3, they had a higher total LOS (10.3 days; 95% CI 3.2-17.4) or were transferred with a mechanical lifter or did not get out of bed on day 1 (7.6 days; 95% CI 0.6-14.6) versus those who walked on day 1. Previously mobile private residence patients had reduced chances of return to private residence if they walked on day 2-3 (OR 0.38; 95% CI 0.17-0.87), or day 4+ (OR 0.38; 95% CI 0.15-0.96), or if they only sat, stood or stepped on the spot on day 1 (OR 0.29; 95% CI 0.13-0.62) versus those who walked on day 1. In private residence patients, each additional physiotherapy session per day was associated with a -2.2 day (95% CI -3.3 to -1.0) shorter acute LOS, and an increased chance of returning to a private residence (OR 1.76; 95% CI 1.02-3.02)

Comment: The authors of this paper argue that the evidence for early mobilisation (within 1-2 days) following hip fracture surgery is clear. However, prior research found that less than 50% of patients walked the day after surgery in Australia. As such, they were interested in exploring if mobilising on another day, or other types of activities apart from walking on day 1 (e.g., sitting, standing) could have similar benefits if mobilising on day 1 was not possible. It appeared that walking on day 1, and higher frequency of physiotherapy sessions increased the likelihood of returning to a private residence with shorter LOS. Activities on day 1 which didn't include walking did not have the same effect. It is clear that we need to focus energy on reducing barriers to early mobilisation rather than settling for alternatives. In this study, the most common reasons for being unable to mobilise on day 1 included being delirious/agitated/confused/drowsy (29%), inadequate pain control (22%), haemodynamic instability (14%), anaemia (7%), and refusal (6%). Perhaps focusing our energy on addressing some of these factors would be a good first step.

Reference: BMC Geriatr. 2024;24(1):629

<u>Abstract</u>

Māori experiences of physical rehabilitation in Aotearoa New Zealand: A scoping review

Authors: Sheehy B et al.

Summary: This scoping review explored Māori experiences of physical rehabilitation based on 14 studies. Four themes were identified using reflexive thematic analysis: expectations of culturally unsafe care that become a reality; whānau were crucial for navigating the culturally alien world of rehabilitation; solutions for incorporation of culturally appropriate Māori practices; and solutions for rehabilitation that empowers Māori. The authors emphasised that rehabilitation clinicians and policymakers need to implement culturally safe approaches to rehabilitation in order to eliminate inequities in care provision and outcomes for Māori.

Comment: The research exploring Maori experiences of rehabilitation is relatively limited and somewhat heterogenous. This scoping review has done a good job of synthesising what is currently available, and the findings highlight many opportunities for strengthening our rehabilitation system for Māori. The first theme is sobering - a cumulative history of negative encounters with our health system means Māori people and whānau come into rehabilitation expecting to feel isolated, misunderstood, alienated... and their experience confirms their expectations. In many ways, these findings are not new - stories of culturally unsafe care, discrimination, absence of tikanga, systemic bias, Eurocentric assumptions and ways of working, and (in the words of this paper) 'cultural collisions' have been endlessly communicated. The pathway to culturally safe rehabilitation communicated in this paper includes: (1) embracing Te Ao Māori me ona tikanga (incorporating and enacting Māori ways of doing things during rehabilitation, and recognising tikanga as a source of recovery); and (2) delivery of manaenhancing services (collaborative and whānau-centred rehabilitation, meaningful connection to people, roles, activities and environments). At face value, this seems quite a simple ask, a minimum standard. But we are yet to meaningfully deliver on these aspirations. Why? Every rehabilitation professional, service, educator, funder, and policymaker has a role to play here. This paper should be a wero (challenge) to all of us.

Reference: Disabil Rehabil. 2024; Jul 11 [Epub ahead of print] Abstract

Peer mentor contributions to an early intervention vocational rehabilitation specialist service following trauma: A qualitative study

Authors: Barclay L et al.

Summary: This study explored the implementation of peer support following trauma within the context of an early intervention vocational rehabilitation (EIVR) service from the perspectives of four peer mentors, three vocational therapists, and 24 mentored patients. Thematic analysis identified three themes: the value of peer input in an EIVR service; facilitators impacting the value of peer involvement; and challenges impacting peer input. Inclusion of peer mentors early after major traumatic injury was a valuable addition to EIVR and enabled patients to achieve a sense of hope for the future and an expectation that returning to work was a realistic goal.

Comment: Peer support is a source of support which draws on knowledge derived from personal experience. The role of peer support on recovery and adaptation following significant injury or illness is receiving growing attention, but this is one of the first times I have seen it embedded within an early vocational rehabilitation intervention. In this case, 'early intervention' meant initiating vocational rehabilitation during inpatient rehabilitation. Participants were a mixed trauma population including traumatic brain injury, spinal cord injury, multi-trauma orthopaedic injury and/or amputation. The findings are positive and highlight that peer support has a distinctive role to play in early vocational rehabilitation following major trauma. I have recently completed a trial of peer support after brain injury in Aotearoa New Zealand (pending publication) and the findings from this research resonate with our findings. Although we didn't intentionally set out to address work outcomes in our trial, we have many examples where our peer mentors had a potentially transformative impact on how our mentees navigated work after brain injury. There is power in shared experience. How might we value and integrate this into our routine rehabilitation service structures?

Reference: Disabil Health J. 2024; Aug 13 [Epub ahead of print]
Abstract

The balancing act - Physiotherapists' experiences of managing rugby-related concussion in the community

Authors: Salmon DM et al.

Summary: This pragmatic, descriptive qualitative study assessed 24 physiotherapists' experiences in the management of community rugby-related concussion as part of the New Zealand Rugby concussion management pathway (CMP). Thematic analysis identified four themes: (1) 'walking the tight rope between player welfare and performance', the balancing act of attitudes and priorities of different stakeholders; (2) empowering physiotherapists' authority and responsibilities within the team and concussion management responsibilities; (3) multi-directional communication between multiple stakeholders; and (4) the influence of context, including the complexity of concussion, the physiotherapists and teams knowledge of concussion, resources, and access to a doctor. Overall, the physiotherapists had positive attitudes towards CMP.

Comment: This was an interesting paper highlighting the complexities physiotherapists face in navigating their role as part of a multidisciplinary team involved in the implementation of the CMP. While physiotherapists valued the CMP and found it useful as a structured pathway of care, they also faced several tensions in practice. Three things that came through in my reading of this included culture, greyness, and mandate. Each highlights a key opportunity for change. (1) In many cases, a culture which privileges team performance over player welfare was persistent and meant physiotherapists routinely grappled with the competing motives and interests of coaches, management, parents, and players. The findings do also make visible contexts in which this culture is shifting. How might we learn from these examples of positive deviance to embed a culture which privileges player welfare? (2) While clear cut cases of concussion were straightforward, the boundaries cases were not. Greyness in the context of rigid stand-down periods added to the weight of responsibility for physiotherapists, with potentially perverse effects. How might the CMP create the context for physiotherapists (and other stakeholders) to navigate this uncertainty and limit unintended effects? (3) Despite being deeply embedded in the pathway and having skills, knowledge, experience and scope of practice to have a more formative role in the CMP, physiotherapists don't have authority at key decision points – this mandate resides with GPs. In a context where demand for GPs exceeds resource, where GP access to specialist concussion education is limited, and where GPs are more removed from the player and team – how might we better leverage the skills, knowledge and positioning of physiotherapists and increase their authority within the CMP?

Reference: Physiother Theory Pract. 2024;40(7):1459-1476

Clinical effectiveness of cardiac rehabilitation and barriers to completion in patients of low socioeconomic status in rural areas: A mixed-methods study

Authors: Beleigoli A et al.

Summary: This Australian mixed-methods study with concurrent retrospective cohort and qualitative study examined the use of cardiac rehabilitation and barriers to completion in economically disadvantaged rural areas. Among 16,159 separations eligible for cardiac rehabilitation, 44.3% of patients received referrals, and 11.2% completed cardiac rehabilitation. Completing the rehabilitation programme reduced the risk of cardiovascular readmission or death (HR 0.65; 95% Cl 0.57-0.74; p < 0.001). A higher risk of non-completion was associated with living alone (OR 1.38; 95% Cl 1.00-1.89; p = 0.048), diabetes (OR 1.48; 95% Cl 1.02-2.13; p = 0.037), and depression (OR 1.54; 95% Cl 1.14-2.08; p = 0.005). A lower risk of non-completion was associated with enrolment in a telehealth programme (OR 0.26; 95% Cl 0.18-0.38; p < 0.001). Thematic analysis of semi-structured interviews and focus groups (n = 28) identified barriers to completion related to logistics, social support, challenges during transition of care, lack of care integration, and lack of person-centeredness.

Comment: This research was mixed methods and has done a relatively good job of bringing together multiple data sources to examine barriers to cardiac rehabilitation completion. I note that no Aboriginal or Torres Strait Islander participants were included in the qualitative component of this research and so future research should explore their distinctive experiences. Findings regarding referral, uptake and completion of cardiac rehabilitation are relatively consistent with past research. Only 33.4% of those referred commenced cardiac rehabilitation. The authors draw on their findings to recommend a range of strategies including: (1) targeted supports for people living alone; (2) reducing waiting times between discharge and commencement (waiting time was 31 days in this research); (3) improved communication regarding the benefits of cardiac rehabilitation (in a way that attends to the health literacy of service users - as an aside, I highly recommend becoming familiar with the notion of 'organisational health literacy' Bremer D et al., BMC Health Serv Res. 2021); and (4) better integration with primary care. The finding regarding telehealth is interesting. On one hand delivery via telehealth was associated with higher completion rates. At the same time, qualitative data highlighted gaps in telehealth delivery around mental health support, exercise training and peer support. I am currently leading some research exploring telerehabilitation in the Aotearoa New Zealand context and early findings suggest that a more nuanced integration of telerehabilitation as part of routine care, rather than as an either/or alternative to face-to-face care may be a good way forward.

Reference: Clin Rehabil. 2024;38(6):837-854

<u>Abstract</u>

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