

Rehabilitation Research Review™

Making Education Easy

Issue 41 – 2017

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Abbreviations used in this issue

EHR = electronic health record

SCI = spinal cord injury



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Welcome to issue 41 of Rehabilitation Research Review, with guest commentary on professional practice in rehabilitation provided by Dr Felicity Bright, a Senior Lecturer in Rehabilitation and Case Management.

Dr Bright begins with a paper reporting on the role of the therapist as a 'neglected, poorly understood variable' in paediatric rehabilitation. A systematic review tempers the benefits of using EHRs (electronic health records) to acquire and share certain health information about a patient with the potential for preventing collection of adequate psychosocial and emotional information, which is very pertinent to rehabilitation services.

The last paper in this issue assesses the evidence on "exergaming", which can be deployed as physical activity or exercise using commercially available game consoles for neurologically disabled individuals in the convenience of their home environment and at a relatively inexpensive cost. It concludes that the clinician should consider exergaming as "at least as good as" (and likely more enjoyable) than traditional arm-exercise modalities, and providing equivalent aerobic dose-potency to "traditional" exercise in clinic or home environments.

We thank Felicity for her contribution on professional practice in this issue, which we hope you enjoy. Your continued comments and suggestions are appreciated.

Kind regards,

Associate Professor Nicola Kayes

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PROFESSIONAL PRACTICES IN REHABILITATION

Invited expert commentary by Felicity Bright

The role of the therapist in therapeutic change: how knowledge from mental health can inform pediatric rehabilitation

Author: King G

Summary: These authors reviewed the literature on the role of therapists in mental health in terms of the roles of the therapist alone, the therapist-client relationship, treatment implementation and the therapist, client and intervention considered holistically. They identified the following implications for clinical practice in paediatric rehabilitation: i) recognition of change as a multidetermined phenomenon involving common therapist-related factors; ii) the therapist's role in creating conditions that facilitate change; and iii) the importance of training in collaborative partnership skills. They advocate for a contextual approach to therapeutic change that: i) acknowledges psychosocial factors and mechanisms; ii) views the therapist's role as crucial; and iii) views the intervention process as the context or vehicle through which changes occur.

Comment: The therapist's role in rehabilitation (or indeed, the role of any professional) has received little attention. Research commonly focuses on the specifics of assessment or treatment, rather than how therapy is done. King conceptualises rehabilitation as a process of change, arguing that this requires attention to the practitioner's role in facilitating a positive context that supports change. This prompts questions about what knowledge and skills practitioners need and how these are addressed within student education and staff development. I suggest it also requires us to rethink what is core rehabilitation work. King's paper supports arguments that rehabilitation practice does not simply require technical, disciplinary-based expertise. Instead, we need to recognise that the relationship between the patient and practitioner is therapeutic and a core component of effective, person-centred rehabilitation practice.

Reference: *Phys Occup Ther Pediatr* 2017;37(2):121-38

[Abstract](#)

Independent commentary by Dr Felicity Bright BSLT(Hons), MHSc(Hons), PhD

Felicity is a Senior Lecturer in Rehabilitation and Case Management. She is a speech-language therapist with expertise in neurological rehabilitation. Her research focuses on professional practices in rehabilitation, and has a particular interest in relational aspects of practice and critical examination of clinical practice.





Co-constructing engagement in stroke rehabilitation: a qualitative study exploring how practitioner engagement can influence patient engagement

Authors: Bright FAS et al.

Summary: This qualitative study explored the ways in which rehabilitation practitioners engage and disengage with their patients, and how these influence patient care and engagement. Interviews, focus groups and observations were undertaken in 11 individuals who experienced communication disability following a stroke and 42 rehabilitation practitioners. It was found that when patients considered their practitioner was engaged, this helped their own engagement; conversely, patient engagement was negatively affected when they considered their practitioner was not engaged. Practitioners viewed their engagement as important but complex, and it impacted on how they worked and their perception of their patients. Disengagement was considered taboo, and it arose when the practitioner was not feeling confident, when outcomes were not positively impacted or when they experienced an emotional response to a patient or interaction. The impact of each party's engagement on the other suggests it was co-constructed.

Comment: I am clearly biased in choosing this paper! Practitioners appeared to feel they 'should' be able to engage patients easily, and that they 'should' be engaged themselves. When this didn't happen, this could lead to a sense that they weren't 'good' practitioners. We need to acknowledge that neither patient nor practitioner engagement always happens automatically, and that it can be challenging. If we don't, practitioners feel they are failing and struggle to ask for help. This study highlights that rehabilitation practice commonly involves an emotional engagement with the patient and the therapy process. This makes me wonder how well we acknowledge the emotional work of rehabilitation practice, and how we can best support practitioners to explore how their emotions impact on themselves, their work and their client.

Reference: *Clin Rehabil*; Published online Feb 1, 2017

[Abstract](#)

Rehabilitation as 'destination triage': a critical examination of discharge planning

Authors: Durocher E et al.

Summary: These authors used microethnographic case study methodology, with a critical bioethics perspective, to examine discharge-planning processes in older adult inpatients undergoing rehabilitation in Canada. Data on observations of discharge-planning family conferences and semistructured interviews conducted with inpatients scheduled for discharge, their family members and rehabilitation professionals indicated that a contextual push from admission that focused on discharge superseded the aims of the programme to provide interventions to increase the patients' functional capabilities. It was also found that consideration of discharge options was limited by the professionals' primary commitment to safety, leading to costly and potentially unnecessary recommendations for 24-hour care. The resulting 'rehabilitation' stay was more akin to an extended process of 'destination triage' with a bias towards the promotion of physical safety and away from optimising functioning.

Comment: This paper used a critical approach to explore the unintended consequences of a focus on discharge planning. I doubt anyone would argue that it is wrong to start discharge planning early, but Durocher *et al* demonstrate how a strong focus on discharge planning can see practitioners and services privilege the patient's immediate personal needs and perceived safety on discharge, to the detriment of addressing what is most important to the patient. Rehabilitation becomes a process of assessment and risk management, instead of a process that prioritises restoration of functional abilities or adapting to and living well with the consequences of stroke. How can we offer evidence-based intervention (which commonly involved early, intensive input) and holistic person-centred care when services commonly prioritise a short length of stay? I suggest that identifying the unintended consequences of policies and taken-for-granted practices is an important starting point.

Reference: *Disabil Rehabil* 2017;39(13):1271-8

[Abstract](#)



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Expert commentary by Nicola Kayes

Professional roles in physiotherapy practice: educating for self-management, relational matching, and coaching for everyday life

Authors: Solvang PK & Fougner M

Summary: The findings of focus-group interviews with physiotherapists were reported, which identified the following three modes of practice: i) physiotherapist educates their patients to be self-managing in conducting sound evidence-based exercise programmes, including the use of educational videos available on the internet; ii) physiotherapist emphasises the importance of a close relationship to the patient, based on the premise that good personal chemistry improves the treatment process; and iii) what the physiotherapist learns about the living conditions and the biographies of their patients is a very important consideration for the treatment process. The authors also discussed these findings in the context of those from other studies identifying factors that contribute to the knowledge base of what is involved in biopsychosocial practice in physiotherapy.

Comment: Solvang's paper explores how physiotherapists see their role in engaging patients in a range of clinical contexts. I was struck by the conflicting messages about practitioner-centred practice, which valued patient compliance and therapist expertise, and patient-centred practice, which valued participation, coaching and relationships. They appeared comfortable with practitioner-centred practice and had a limited range of strategies to facilitate a person-centred way of working. This reminds me of Karen Whalley Hammell's descriptions of the rhetoric of person-centred care, that we often claim to be person-centred, yet close examination of practice shows the reality is somewhat different. If we are to try and change our practice, perhaps asking the questions 'in which ways is our practice person-centred, and in which ways is it not?' might help us tease out areas for change.

Reference: *Physiother Theory Pract* 2016;32(8):591–602

[Abstract](#)

Patient-centered communication in the era of electronic health records: what does the evidence say?

Authors: Rathert C et al.

Summary: This systematic review of 41 articles reported that EHRs (electronic health records) may help in the capture and sharing of certain biomedical information, but they may also be an impediment to the collection of psychosocial and emotional information, thereby interfering with the development of supportive, healing relationships. The ability for patients to access their own EHRs and messaging functions may improve communication, patient empowerment, engagement and self-management.

Comment: This review demonstrates how EHRs impact on patient-provider interactions. While this paper did not explicitly focus on rehabilitation, its findings are highly relevant. While EHRs appear to be particularly helpful for capturing biomedical information, we need to consider how they might not capture emotional and psychosocial elements – things crucial in rehabilitation. When our focus is on the electronic system, we are less attuned to these aspects of the patient's story. One reason for this is that EHRs are a 'third agent' in the interaction, something echoed by Davina Allen in her recent [editorial](#). While EHRs have many positive features, it is worth being mindful about how they influence our interactions, what information is privileged, and what this means for the patient's care.

Reference: *Patient Educ Couns* 2017;100(1):50–64

[Abstract](#)

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A systematic review of interventions to increase the use of standardized outcome measures by rehabilitation professionals

Authors: Colquhoun HL et al.

Summary: This systematic review included 11 studies testing interventions to increase the knowledge about, attitudes towards, and use of standardised outcome measures among core rehabilitation professionals in the fields of Occupational Therapy, Physiotherapy, and Speech Language Pathology. A standardised outcome measure was defined as an instrument designed to describe, evaluate and/or predict an attribute. All studies were published between 2000 and 2016. Overall, 9 studies showed improvements in use rates of outcome measures, but only 3 of these studies used an experimental or quasi-experimental design. Eight of the studies used an educational approach in the intervention and 3 used audit and feedback. The weakness of the study designs and poor descriptions of interventions limited recommendations.

Comment: Outcome measurement in rehabilitation is a great example of a core rehabilitation process that has long been discussed, but which we still fail to see routinely taken up in practice. I suspect the findings of this review could translate to a number of other taken for granted rehabilitation processes: the lack of robust research explicitly supporting integration into routine practice; an over-reliance on educational strategies at the expense of more theoretically informed behaviour change techniques; and a focus on individual level behaviour change without due consideration given to the required team and organisational level changes. There is a clear need for more robust and theoretically sound intervention research if we are to influence these rehabilitation practices. In the meantime, on the topic of outcome measurement, I find it hard to look past Lynne Turner-Stokes' 2012 paper on 'engaging the hearts and minds of clinicians in outcome measurement' ([Disabil Rehabil](#) 2012;34(22):1871–9).

Reference: *Clin Rehabil* 2017;31(3):299–309

[Abstract](#)



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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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Ready for eHealth? Health professionals' acceptance and adoption of eHealth interventions in inpatient routine care

Authors: Hennemann S et al.

Summary: These researchers explored the current status of acceptance of eHealth interventions for patient's health promotion among health professionals from a broad range of professional groups caring for inpatients in rehabilitation facilities. The study also sought to determine individual barriers and facilitators to acceptance. Data were analysed from 128 health professionals who completed a self-administered web-based questionnaire. Acceptance and possible predictors were investigated with a complex research model based on the Unified Theory of Acceptance and Use of Technology. Acceptance of eHealth interventions was rather low ($M = 2.47$) and did not differ between age groups or inpatient facilities, while acceptance of online aftercare was moderate across occupational groups ($M = 3.08$, $t(127) = 8.22$; $p < 0.001$), and eHealth literacy was elevated. Social influence, performance expectancy, and treatment-related internet and mobile use were all significant predictors of overall acceptance.

Comment: I read this paper with interest, as it relates to research we have ongoing. The findings suggest acceptance of eHealth interventions remains surprisingly low. While there were some factors associated with higher levels of acceptance (e.g. performance expectations and social influences), there was a predominant view that eHealth interventions are not a suitable alternate to existing approaches. Perhaps they are asking the wrong question though, particularly in the context of inpatient service provision. Perhaps, instead of looking at eHealth as an *alternative*, we need to consider how eHealth can *augment* and *add value* to existing practices. It is also important to look beyond the individual to organisational culture and context, given there is likely to be a complex array of influencing factors at play. A framework I find particularly useful when thinking about the adoption of new practices is Carl May's Normalisation Process Theory (see www.normalizationprocess.org for a useful overview).

Reference: *J Health Commun* 2017;22(3):274–84
[Abstract](#)

Negotiating identity and self-image: perceptions of falls in ambulatory individuals with spinal cord injury – a qualitative study

Authors: Jørgensen V, Roaldsen KS

Summary: This research explored how individuals with chronic incomplete traumatic spinal cord injury (SCI) experience and perceive falls, the risk of falling and fall-related consequences. All 15 study participants (10 men and 5 women, aged 23–78 years) were recruited from a specialised rehabilitation hospital and were walking $\geq 75\%$ of time for mobility needs. Injuries had been sustained 2–34 years before this study was conducted. Coding of data from individual, semi-structured face-to-face interviews revealed one overarching theme: "Falling challenges identity and self-image as normal", which consisted of two main themes, "Walking with incomplete SCI involves minimising fall risk and fall-related concerns without compromising identity as normal" and "Walking with incomplete SCI implies willingness to increase fall risk in order to maintain identity as normal". The participants considered an enhanced risk of falling and falls to be a part of life, and they developed preventive strategies and justified concerns to protect their vulnerable bodies against falls and fall-related consequences. Nevertheless, they were also willing to take risks to emphasise a normal identity.

Comment: I found this a really interesting read! I am always struck by the complexity inherent in navigating self and identity following significant injury and the contexts in which it can play out in the narratives of people with lived experience. I am not aware of other research that attempts to explore perception of falls in incomplete SCI as this research has done. Most falls research is conducted in older adults, yet I think it is clear from these findings that there are some unique falls-related experiences that need attention in the context of SCI. In particular, participants described a careful balancing act between the adoption of protective strategies to minimise the risk of falls while at the same time intentionally engaging in activities that may place them at risk in the name of normality. It is important that our rehabilitation strategies remain cognisant of the fine line people are negotiating with respect to self and identity.

Reference: *Clin Rehabil* 2017;31(4):544–54
[Abstract](#)

Independent commentary by Associate Professor Nicola Kayes

Associate Professor Nicola Kayes is 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 undergraduate and postgraduate teaching in rehabilitation at the School of Clinical Sciences at Auckland University of Technology.



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Development of the Participation Measure–3 Domains, 4 Dimensions (PM-3D4D): a new outcome measure for rehabilitation

Authors: Chang FH et al.

Summary: This paper describes the development of a participation measure, the Participation Measure-3 Domains, 4 Dimensions (PM-3D4D), which assesses 3 domains (productivity, social, and community) and 4 dimensions (frequency, diversity, desire for change, and perceived difficulty) of participation, including evaluation of the initial psychometric properties in rehabilitation outpatients. Twelve rehabilitation and measurement experts formed an expert panel to contribute to measurement development. Cognitive interviews were held with 20 rehabilitation outpatients, and field testing was conducted with 556 rehabilitation outpatients (average age, 61.36 years). A scoring method for each dimension of the PM-3D4D was established. The instrument displayed good overall model fit in a confirmatory factor analysis and unidimensionality across 3 domains after removing and collapsing locally dependent items identified from a principal component analysis. However, the social subscale demonstrated poor person reliability and was highly correlated with the community subscale, so the researchers merged both subscales into one. The combined subscale showed improved reliability and good construct validity by demonstrating good model fit and item fit.

Comment: There is much debate relating to the measurement of participation that this paper touches on. What constitutes a good participation outcome? Is more better? Or, is it better to have less, but to have better quality participatory experiences? Or, do neither of these things matter so long as someone is participating in the things they want to, to the extent they want to? The new measure proposed in this paper attempts to account for a number of dimensions associated with participation, namely frequency, diversity, desire for change, and perceived difficulty. Certainly, their approach to measure development and testing appears robust. There is, however, the inherent assumption that more is better, with frequency and diversity contributing to the overall score, and so care should be taken when interpreting measurement data with that in mind. I urge practitioners and researchers to think carefully when selecting measures and ask the following questions: What do you want to measure? Why do you want to measure it? What do you want to do with the data? This will ensure you stay critical and keep an open mind during measure selection.

Reference: *Arch Phys Med Rehabil* 2017;98(2):286–94

[Abstract](#)

Exergaming for individuals with neurological disability: a systematic review

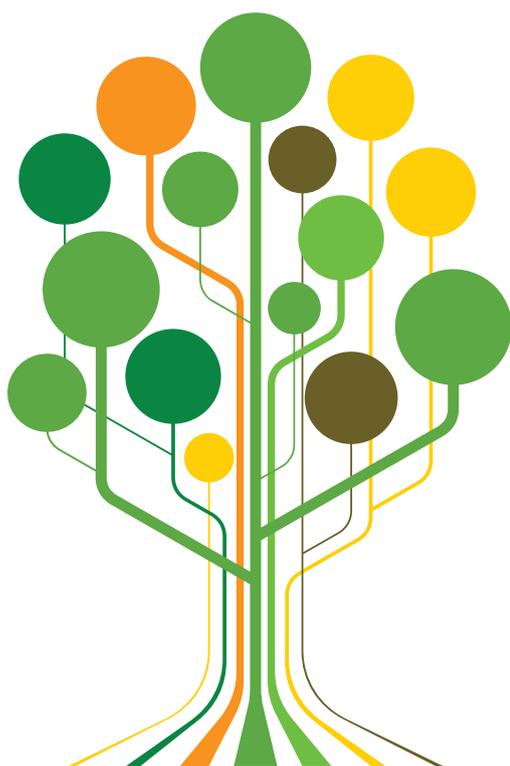
Authors: Mat Rosly M et al.

Summary: This systematic review of the published literature explored whether “exergaming” is a feasible modality for providing moderate intensity physical activity as recommended by the American College of Sports Medicine (ACSM) or WHO guidelines, for people with neurological disabilities. Ten studies met the inclusion criteria and were reviewed. Exergames were divided into their respective console types (XaviX, Nintendo, Playstation or Xbox), type of gameplay used (Tennis, Boxing, Jogging, GameCycle etc.) and position (sitting/standing) of the exergame played. Key outcome measures included responses, such as energy expenditure, heart rate and perceived exertion. Of the 17 types of exergaming interventions, 12 met the recommended “moderate intensity” physical activity guided by ACSM or WHO guidelines. Exergames such as Wii Jogging, Bicycling, Boxing, DDR and GameCycle reported moderate physical activity intensities; Wii Snowboarding, Skiing and Bowling reported light intensities.

Comment: There is increasing interest in the role of game-based technologies in rehabilitation. The majority of the ten included papers reviewed indicated that commercially available games, such as the Nintendo Wii, meet the recommended guidelines for moderate intensity exercise. However, the extent to which games achieved this level of intensity depended on the console type, the gameplay used, and position of the gamer (sitting/standing). Notably, it appeared harder to achieve moderate intensity when seated, though this was possible under certain conditions. This may have important implications when recommending exergaming as an alternate to a more conventional exercise programme for wheelchair users. Interestingly, all of the included studies were based primarily in laboratory settings. This is disappointing, given the argument presented is for the potential of exergaming to overcome barriers and enable people to meet guidelines within the context of their own home. Further research is needed to see if these findings are transferable to a free-living environment.

Reference: *Disabil Rehabil* 2017;39(8):727–35

[Abstract](#)



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