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Rehabilitation

Current Awareness Bulletin

June 2025

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Book a session today at https://forms.office.com/e/HyiSXfDaYV (these sessions will be held on a monthly basis)

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1. **Comparison of Spencer muscle energy technique and conventional physiotherapy on pain and disability in shoulder adhesive capsulitis: a quasi-experimental study**

   Authors: Amin, Aisha;Malik, Ramsha;Memon, Sajjan Iqbal;Awan, Zainab Zafar;Almas, Faiza;Hussain, Rabia Talab and Zahra, Qurat-ul-ain

   Publication Date: 2025

   Journal: Bulletin of Faculty of Physical Therapy

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2. **Physiotherapist-targeted strategies and tools for recognising patients with limited health literacy and adapting physiotherapeutic communication: A scoping review**

   Authors: Bruin, Nicole;Wittink, Harriet;Oosterhaven, Janke;Hesselink, Arlette;Hobbelen, Hans and Lakke, Sandra

   Publication Date: 2025

   Journal: Patient Education & Counseling

2. **The effect of multimodal prehabilitation on postoperative outcomes in lung cancer surgery**

Authors: Cho, Ah-Reum;Najafi, Tahereh;Ramanakumar, Agnihotram V.;Ferri, Lorenzo;Spicer, Jonathan;Najmeh, Sara;Cools-Lartigue, Jonathan;Sirois, Christian;Soh, Sonya;Kim, Do Jun and Carli, Franco

Publication Date: 2025

Journal: The Journal of Thoracic and Cardiovascular Surgery

Abstract: Competing Interests: Conflict of Interest Statement The authors reported no conflicts of interest. The Journal policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.; Objective: Patients with lung cancer are often elderly, frail, and smokers with poor functional reserve, making them excellent candidates for multimodal prehabilitation to improve postoperative outcomes. Patients referred to the prehabilitation clinic are at an even higher surgical risk. This retrospective observational study aimed to compare the postoperative 30-day outcomes in lung cancer surgery among the propensity score-matched patients.; Methods: Patients who underwent lung cancer surgery between August 2018 and January 2024 were accessed for eligibility. After exclusion, a 1:1 propensity score-matching analysis was performed based on the following baseline characteristics: respiratory disease, predicted length of stay based on American College of Surgeons National Surgical Quality Improvement Program, Duke Activity Status Index less than 34, tumor stage, and neoadjuvant therapy. Baseline characteristics, preoperative and intraoperative data, and postoperative outcomes were compared between the matched patients.; Results: Among 1242 patients, 555 were selected for propensity score matching, resulting in 147 matched pairs in each group. The control group exhibited significantly higher rates of overall (65.3% vs 46.3%, P = .001) and major complications (27.9% vs 13.6%, P = .003). Patients who underwent multimodal prehabilitation had a significantly lower Comprehensive Complication Index (12.2 0-26.2] vs 0 0-20.9], P < .0001), reduced intensive care unit admission rates (8.2% vs 2.7%, P = .040), and lower readmission rates (14.3% vs 6.1%, P = .021).; Conclusions: Multimodal prehabilitation significantly reduced overall and major postoperative 30-day complications in lung cancer surgery. It also contributed to reducing the severity of complications. These findings suggest that multimodal prehabilitation may improve postoperative outcomes for patients with lung cancer.

4. **Rehabilitation and physiotherapists in the critical care medicine**

Authors: Clini, E.;Costi, S. and Girardis, M.

Publication Date: 2025

Journal: Pulmonology

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5. **Implementing vocational rehabilitation for people with multiple sclerosis in the UK National Health Service: a mixed-methods feasibility study**

Authors: De Dios Perez, Blanca;Holmes, Jain;Elder, Tracey;Lindley, Rebecca;Evangelou, Nikos;das Nair, Roshan;Senior, Caolan;Booth, Vicky;Hassard, Juliet;Ford, Helen L.;Newsome, Ian and Radford, Kate

Publication Date: 2025

Journal: Disability & Rehabilitation

Abstract: Purpose: To implement a job retention vocational rehabilitation (VR) intervention (MSVR) for people with multiple sclerosis (MS) and their employers in the UK National Health Service (NHS). Methods: Multicentre, single-arm feasibility study with post-intervention interviews. MSVR was delivered by an occupational therapist (OT). Feasibility was assessed by recruitment rates, compliance, and practicality of delivery. Acceptability was assessed with post-intervention interviews. A survey assessed change in eight vocational outcomes (e.g., vocational goals, work instability) immediately post-intervention and at 3-month follow-up. Results: Recruitment and training an OT was challenging. Twenty participants with MS, three employers, and three healthcare professionals were recruited. All participants but one completed the intervention. Factors affecting intervention adherence included annual leave and family responsibilities. MSVR was associated with improved vocational goal attainment post-intervention ($t(18) = 7.41$, $p = <0.001$) and at follow-up ($t(17) = 6.01$, $p = <0.001$). There was no change to the remaining outcomes. Interviews identified six themes: intervention impact, accessibility of support, the OT's role, readiness for support, workplace supportiveness, and barriers to NHS delivery. Conclusion: Challenges with recruitment, identifying newly diagnosed MS participants, and understanding the OT's training needs to deliver the intervention were identified. The intervention demonstrated acceptability, but participants wanted it to continue for longer to address further needs. IMPLICATIONS FOR REHABILITATION: Successful implementation of vocational rehabilitation services for people with multiple sclerosis within healthcare services requires multiple environmental and pragmatic changes. Healthcare professionals should record employment status from diagnosis to monitor changes in employment over the disease course, highlighting changes in working hours, occupation type, and employment rates. Vocational rehabilitation has the potential to improve the confidence of people with MS around symptom management and feeling supported and empowered at work.

6. **Addressing Changing Healthcare Needs: A Realist-Inspired Review of Innovative Rehabilitation Care Models.**

Authors: Giroux C.M.;Contandriopoulos D.;Bussieres A.;Ahmed S.;Letts L.;Boruff J.;Starr L. and Thomas, A.

Publication Date: 2025

Journal: Journal of Evaluation in Clinical Practice

Abstract: Rationale/Objectives: Canadian healthcare is facing an aging population, an increasing prevalence of chronic disease and related disability, and rising healthcare costs. Integrating innovative rehabilitation models of care may help bolster health systems by shifting to a longer-term approach to addressing health and wellbeing. However, little is known about how these care models may look and what is needed to ensure their effective operationalization in practice.
Method(s): This realist-inspired narrative review explored how, when, and in what circumstances innovative models of care have been successfully implemented and sustained in rehabilitation. The peer-reviewed and grey literature was searched and subsequently screened by title, abstract, and full text. Data extracted from included articles focused on identifying contexts, mechanisms, and outcomes. A numerical analysis of quantitative data and a conventional content analysis of qualitative abstractions was conducted.
Result(s): Twenty-six documents published between 2014 and 2021 were uncovered predominantly from Australia and Canada. Overall, for new care models to be successfully implemented and sustained, they need to: (1) have clearly articulated goals, (2) have access to short- and long-term funding, (3) align with key legislative changes to optimise buy-in, (4) take a multidisciplinary approach that is supported by management, and (5) include educational and outreach strategies that can be implemented amongst all interested parties.
Conclusion(s): The heterogeneity of studies and limitations in their reporting precluded the identification of context-mechanism-outcome configurations typically found in realist reviews. Future implementation research should draw on relevant reporting guidelines to report their findings.

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7. **Association between Dementia and Early Rehabilitation in Older Inpatients with Internal Medical Conditions.**

Authors: Kawasaki N.;Miyawaki A.;Kimura Y.;Matsuo Y.;Fushimi K. and Yasunaga, H.

Publication Date: 2025

Journal: Journal of the American Medical Directors Association

Date of Publication: 2025

8. **The effect of traditional Thai massage vs routine physical therapy on gait pattern in spastic cerebral palsy: A cross-over randomized controlled trial.**

Authors: Lertwiram P.;Angsanuntsukh C.;Supapitanon K.;Patathong T.;Iamchaimongkol A.;Baosuwan S.;Ongtanasin P.;Srinorasit P. and Woratanarat, P.

Publication Date: 2025

Journal: Plos One

Abstract: Background Various types of massage, including the traditional Thai, have not yet provided conclusive evidence to reduce the spasticity and improve walking ability for cerebral palsy (CP). Objectives To assess the effect of traditional Thai massage (TM) vs. a standard physical therapy (PT) on gait pattern in spastic CP. Methods A cross-over single blinded randomized controlled trial was conducted between October 2022 and October 2023 (Thai Clinical Trials Registry: TCTR20220530007). Individuals with aged 5 years or older, and diagnosed as spastic CP, Gross Motor Function Classification System (GMFCS) I-III were recruited. Participants were randomly assigned into group A (TM followed by PT), and group B (PT followed by TM). Each treatment lasted for 6 weeks (Phase I-II), with a 6-week washout period. Lower extremity range of motion, muscle tone, electromyography, gait profile score (GPS), oxygen consumption was blindly assessed and intention-to-treat analyzed. Results From 32 eligible patients (16 cases per group), average age was 16.1 +/- 9.8 years (group A), and 13.6 +/- 5.8 years (group B). Group B demonstrated higher left ankle dorsiflexion than group A (1.7 +/- 13.0 degrees vs 12.1 +/- 6.9 degrees, P-value = 0.011). GPS slightly improved in Phase I, and contradictory enhanced in TM while deteriorated in PT in Phase II without significant differences between groups. After adjusted for ankle dorsiflexion, TM significantly provided less overall GPS (-1.6 (95% confidence interval (CI) -2.6, -0.6), P-value = 0.001), and higher peak activity of right rectus femoris (0.132 mV (95%CI 0.001, 0.262), P-value = 0.030) compared to PT. Other outcomes did not differ significantly between two treatments, and no complication was detected. Conclusions TM has a positive effect on gait performance, as indicated by GPS and increased activity in the right rectus femoris muscle when compared to PT. A large-scale non-inferiority trial is required to affirm the impact of TM.

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9. **Network Meta-Analysis of 4 Rehabilitation Methods With rTMS on Upper Limb Function and Daily Activities in Patients With Stroke.**

Authors: Lin X.;Li H.;Chen N. and Wu, X.

Publication Date: 2025

Journal: Stroke

Abstract: BACKGROUND: Stroke is one of the leading causes of disability and death

worldwide, often leading to physical paralysis and cognitive dysfunction, seriously affecting patients' quality of life, and increasing economic burden. Repetitive transcranial magnetic stimulation (rTMS), a noninvasive brain stimulation technique, has been used in stroke rehabilitation, but the difference in efficacy among rehabilitation methods combined with rTMS is unclear. In this study, we compared the effects of 4 rehabilitation methods, namely, clinical routine rehabilitation therapy, smart rehabilitation therapy, behavioral rehabilitation therapy, and Chinese traditional rehabilitation therapy (CTRT) combined with rTMS on the upper limb function and activities of daily living of patients with stroke through a reticulated meta-analysis, which provided a basis for clinical optimization of rehabilitation strategies.
METHOD(S): Six databases, namely, PubMed, Embase, Web of Science, Cochrane, EBSCO, and China National Knowledge Infrastructure, were systematically searched, and 24 randomized controlled trials with a total of 868 patients with stroke were finally included. The primary outcome indicators were upper limb Fugl-Meyer assessment and activities of daily living (Barthel index, modified Barthel index, and functional independence measure were included). Network meta-analysis was performed using Stata 17.0 to assess the relative effect of each combined intervention and examine the consistency of direct and indirect evidence.
RESULT(S): In this study, a total of 24 randomized controlled trials involving 868 patients with stroke were included. CTRT combined with rTMS had the most significant upper limb Fugl-Meyer assessment improvement CTRT (standardized mean difference [SMD], 1.23 [95% CI, 0.95-1.52]; P0.05). The combination of smart rehabilitation therapy with rTMS had the most significant improvement effect on the wolf motor function test (SMD, 0.78 [95% CI, 0.39-1.16]; P<0.0001), CTRT combined with rTMS had the most significant effect that improved upper limb modified Ashworth scale (SMD, -0.67 [95% CI, -0.99 to -0.36]; P<0.0001), and behavioral rehabilitation therapy combined with rTMS had the most significant effect that improved grip strength (SMD, 1.21 [95% CI, 0.42-2.00]; P<0.01).
CONCLUSION(S): This meta-analysis shows varied efficacy of 4 rehabilitation methods combined with rTMS in improving body functions and structures along with activities and participation in patients with stroke. Behavioral rehabilitation therapy combined with rTMS enhances hand strength, and CTRT and clinical routine rehabilitation therapy combined with rTMS improve upper limb Fugl-Meyer assessment and reduce upper limb modified Ashworth scale, while smart rehabilitation therapy combined with rTMS boosts activities of daily living. These results highlight the need for personalized rehabilitation strategies based on individual patient needs to optimize outcomes. Future research should explore the mechanisms underlying these differences.

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10. **Referral to chronic pain management and physiotherapy services in adults with severe mental illness: A matched cohort study.**

Authors: Ma R.;Romano E.;Perera G.;Thompson T.;Vancampfort D.;Stewart R.;Boge K.;Mossaheb N.;Ashworth M. and Stubbs, B.

Publication Date: 2025

Journal: General Hospital Psychiatry

Abstract: Introduction: Chronic pain (CP) is common among people with severe mental illness (SMI). It remains unclear whether patients with comorbid CP and SMI receive equivalent pain

management referrals compared to those with CP alone. This retrospective cohort study used linked primary and mental healthcare data to address this knowledge gap.
Method(s): We identified patients aged >=18 years with comorbid SMI and CP from secondary mental healthcare records, with the later of either diagnosis serving as the index date. Cases were matched 1:4 by age bands and gender to controls with CP but no SMI diagnosis. Co-primary outcomes were referrals to specialized pain treatment services and musculoskeletal physiotherapy. Cox regression models analyzed associations between SMI status and referral patterns, with sensitivity analyses stratifying follow-up into early (0-3.99 years), medium (4-7.99 years), and late (>=8 years) periods.
Result(s): The final sample included 1120 patients with CP and SMI and 2681 matched non-SMI controls. SMI diagnosis strongly predicted increased healthcare utilization in adjusted analyses, with significantly higher referral rates to pain treatments (HR = 13.2, 95 % CI 7.8-22.4, p < 0.001) and physiotherapy (HR = 11.5, 95 % CI 9.3-14.4, p < 0.001). The association between SMI and pain treatment referrals was strongest during the early post-diagnosis period (HR = 13.2, 95 % CI 6.6-26.4, p < 0.001).
Conclusion(s): Contrary to expectations, people with SMI and CP received more pain management referrals compared to matched controls, particularly in the early post-diagnosis period. These findings were restricted to those with a CP diagnosis already, and further research should investigate whether increased referrals translate to improved clinical outcomes.

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11. **Physical activity promotion in physical therapy, exercise therapy and other movement-based therapies: a scoping review and content analysis of intervention studies and theoretical works**

Authors: Matting, Leon;Pfeifer, Klaus;Sudeck, Gorden;Jung, Andrés;Langhirt, Florian and Geidl, Wolfgang

Publication Date: 2025

Journal: International Journal of Behavioral Nutrition & Physical Activity 22(1), pp. 1–20

Abstract: Background: Movement-based therapists, including physical, exercise, and sport therapists, play a key role in promoting physical activity in individuals with non-communicable diseases. However, no clear consensus exists on effective intervention approaches. This scoping review examines available intervention studies and theoretical works for physical activity promotion in movement-based therapy. Methods: In accordance with Colquhoun et al.'s framework and PRISMA-ScR guidelines, we systematically searched PubMed, Scopus, Web of Science, and PsycINFO until March 31, 2024. Eligible records described physical activity-promoting concepts including interventional studies and theoretical works applicable in movement-based therapies for individuals with non-communicable diseases. Data extraction covered assessment, therapeutic content, didactic-methodological principles, and theoretical underpinnings. Interventions were categorized based on behavior change techniques (BCTs), the behavior change wheel, and a clinical reasoning model for clients behavior change. Network analysis explored relationships between therapeutic content and didactic-methodological principles. Results: Fifty-seven records met inclusion criteria; 77% were intervention studies, and 23% were theoretical works. Most concepts originated from

orthopedics/rheumatology (23%), neurology (21%), and oncology (9%), while 12% were generic concepts. Across concepts, 66 biopsychosocial assessment instruments and 60 BCTs were applied (Median BCTs per concept: 11.5, range: 4–37). Key didactic-methodological principles included tailoring/individualization (n = 47), active participation (n = 39), collaborative communication (n = 21), and patient self-responsibility and independence (n = 14). Least mentioned was facilitating positive movement experiences and enjoyment of physical activity (n = 3). Network analysis identified action planning, goal setting, and feedback as central BCTs. Conclusion: This review provides an overview of 57 physical activity promotion concepts used in movement-based therapies for individuals with non-communicable diseases. Findings reveal considerable heterogeneity, highlighting diverse strategies used by movement-based therapists to influence physical activity behavior. Trial registration: Open Science Framework (OSF), December 23, 2022 (DOI: https://doi.org/10.17605/OSF.IO/AXZSJ).

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12. **Voices from the clinic: a qualitative analysis of physiotherapy strategies in musculoskeletal care for knee osteoarthritis patients**

Authors: Nguyen, Jennifer;Naylor, Justine M.;Dennis, Sarah;Livings, Rebecca;Mills, Kathryn;Schabrun, Siobhan M. and Thom, Jeanette M.

Publication Date: 2025

Journal: BMC Musculoskeletal Disorders

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13. **The value of inpatient rehabilitation on patient function and quality of life after multiple trauma**

Authors: Olver, John;Fedele, Bianca;Tuminello, Matthew;McKenzie, Dean;O'Meara, Kerry;Hill, Bridget;Goodridge, Jo and Hunter, Robin

Publication Date: 2025

Journal: Injury

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14. **Additional effect of high-intensity laser therapy with conventional physiotherapy related to pain and function in patients with knee osteoarthritis: a randomized, double-blind, placebo-controlled, 12-week follow-up study.**

Authors: Ozgozen S.;Ozgozen A.L.;Analan P.D. and Incekas, C.

Publication Date: 2025

Journal: Lasers in Medical Science

Abstract: Objective: High-intensity laser therapy (HILT) is a relatively new form of Nd: YAG laser. The aim of the study is to investigate the additional benefits of HILT with conventional physiotherapy, related to pain and function, in patients with knee osteoarthritis (KOA). Method(s): The study comprised 43 knees from 31 patients of both genders with mean age

54.6 +/- 6.22 (41-64) years. 53.49% of the knees were Kellgren Lawrence (KL) grade 2, and rest were KL grade 3 KOA. Group 1 (n = 21) received transcutaneous electrical nerve stimulation (TENS), hot packs (HP), exercises (EX), and HILT (Nd: yag-laser, 10 W). Group 2 (n = 22), received the same interventions but placebo HILT. All interventions were applied for 10 sessions. The Visual Analog Scale (VAS), Western Ontario & McMaster Universities Osteoarthritis Questionnaire (WOMAC), and Lequesne Algofunctional Index (LAI) were administered before, after, and at 12-week follow-up.
Result(s): Baseline VAS, WOMAC, and LAI scores of the groups were similar ($p > 0.05$). After treatment and 12 weeks of follow-up, both groups had significant relief for VAS, WOMAC, LAI pain (respectively, $p < 0.001$) and function ($p < 0.012$), except LAI-walking distance ($p = 0.415$). Post-hoc analyses and mixed-effects models showed no significant differences between groups over time for all variables.
Conclusion(s): HILT did not provide additional short- or mid-term benefits in pain or function when added to a conventional physiotherapy and exercise program in patients with stage 2 or 3 knee osteoarthritis under 65 years of age.

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15. **Combining immersive exergaming with physiotherapy in a specialized intensive Parkinson's disease rehabilitation program: a randomized controlled trial**

Authors: Pimenta Silva, Daniela;Bouça-Machado, Raquel;Pona-Ferreira, Filipa;Lobo, Teresa;Cacho, Ricardo;Anker, Rebekka;Krakauer, John W. and Ferreira, Joaquim J.

Publication Date: 2025

Journal: Journal of NeuroEngineering & Rehabilitation (JNER)

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16. **Effect of Pulsed Electromagnetic Field Therapy Combined with Conventional Physiotherapy on Pain and Disability in Individuals with Lumbar Disc Herniation - A Case Report.**

Authors: Radhika;Gupta I.;Midha D.;Arumugam N. and Singh, M.

Publication Date: 2025

Journal: International Journal of Health Sciences and Research

Abstract: Introduction: This case report aims to explore the effects of combining pulsed electromagnetic field (PEMF) therapy with conventional physiotherapy in managing lumbar disc herniation (LDH). A 41year-old male patient presented with complaints of low back pain radiating to the right lower limb, accompanied by numbness and intermittent tingling sensations. The symptoms had persisted for 3 months progressively affecting the patient's mobility and daily activities.
Method(s): A treatment protocol integrating PEMF therapy with conventional physiotherapy, including manual therapy and exercises, was administered for 3 weeks. Pain intensity and disability levels were assessed using standardized outcome measures, the Numeric Pain

Rating Scale (NPRS) and Oswestry Disability Index (ODI).
Result(s): Following treatment, the patient experienced a marked reduction in pain and improvement in functional capacity. The NPRS decreased from 7/10 to 2/10 in 15 sessions, and the ODI score improved from 80 % to 32%.
Discussion(s): This case highlights the potential benefits of integrating PEMF therapy with conventional physiotherapy in the management of LDH. Although findings from a single case cannot be generalized, this report supports the need for further investigation into the combined use of PEMF and conventional physiotherapy as a conservative treatment strategy for LDH.
Conclusion(s): This report suggests that integrating PEMF therapy with standard physiotherapy may be beneficial for managing LDH. Further research is required to validate these findings in larger populations.

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17. **The dynamics of affective experiences with wheelchair use during rehabilitation: A qualitative study through physiotherapists' perspectives**

Authors: Rasoulivalajoozi, Mohsen;Cucuzzella, Carmela and Farhoudi, Morteza

Publication Date: 2025

Journal: Acta Psychologica

Abstract: Competing Interests: Declaration of competing interest The authors declare no conflicts of interest.; The interaction between users and mobility aids, including emotional attachment and functional expectations, influences their perceptions and decisions on acceptance and continued use during rehabilitation. Tracking interactions during rehabilitation helps identify key intervention points, leading to effective therapeutic relationships and user-centered mobility aid designs. This study aims to track the dynamics of affective experiences (DAE) of wheelchair users (WUs) during a planned rehabilitation timeframe and recommend how to manage these dynamics. To this end, initially, the product experience framework was applied for the development of interview guidelines and analysis. Next, adopting a qualitative approach, semi-structured, in-depth interviews with 12 experienced physiotherapists were conducted in Iran. Transcripts were then analyzed using a thematic analysis framework to identify themes. A total of three themes have been identified which include: 1) Coping in Using the Wheelchair, 2) Reluctant Acceptance of the Wheelchair: Adjusting to the New Normal, and 3) Approaching Recovery: Challenges in Over-reliance. Additionally, two diagrams illustrating the dynamics of the affective experience of WUs and its influencing factors during rehabilitation have been provided. This study shows that the affective experience of WUs is not static and changes through various stages of rehabilitation. This dynamic is influenced by factors of emotional and functional importance, both of which often grow after initial resistance but follow varied patterns. However, emotional attachment can sometimes lead to over-reliance even after recovery, posing challenges in the rehabilitation. Physiotherapists can help balance this attachment, influencing users' affective experiences with their wheelchairs.

18. **Quantifying At-Home Physiotherapy Participation: SPARS vs Self-Reported Diaries.**

Authors: Rezkalla M.;Boyer P.;Burns D.;Renteria C. and Whyne, C.

Publication Date: 2025

Journal: Archives of Rehabilitation Research and Clinical Translation

Abstract: The completion of at-home physiotherapy exercise is key to many rehabilitation protocols. This study compares at-home upper extremity physiotherapy participation as measured based on data captured with a smart watch to that recorded in self-report diaries. Daily at-home exercise participation (sessions) was recorded for 53 patients with rotator cuff pathology during their first 2 weeks of a 12-week physiotherapy rehabilitation program. Exercise participation was measured using a physical therapy monitoring system that uses smart watch (accelerometer/gyroscope) data analyzed via a convolutional neural network trained on labeled patient-specific in-clinic data and compared to patient reported diaries. A high level of agreement between diary exercise participation and the measurements derived from the smart watch data (ICC=0.72, n=53) was found, with an AUROC=0.99 for binary identification of exercise periods on labeled clinic data. However, overall patient diaries reported more exercise performed (0.96 additional days on average) than measured by the ML algorithm. ML and accelerometer/gyroscope data collected by embedded sensors in a smartwatch represents an accurate and objective alternative to self-reported diaries for monitoring patient at-home participation. Lower levels recorded by the ML algorithm may indicate some limitations in the technology to fully capture participation or potential over-reporting of participation within diaries. As self-reported diary completion decreases over time, physical therapy monitoring technology may represent an acceptable method for longer term assessment of exercise participation.

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19. **Rehabilitation Model for Post-Disaster Post-Traumatic Stress Syndrome: Relaxation-Based Supervised Exercise.**

Authors: Sancaktar S. and Ergezen Sahin, G.

Publication Date: 2025

Journal: Disaster Medicine and Public Health Preparedness

Abstract: OBJECTIVES: This study aimed to evaluate the effects of relaxation-based exercises on individuals experiencing post-earthquake stress-related symptoms in an earthquake-prone region.
METHOD(S): This randomized, waitlist-controlled, parallel group study included 46 participants with moderate post-traumatic stress levels (Posttraumatic Stress Diagnostic Scale, PDS) and anxiety for over 1 month (Beck Anxiety Inventory, BAI score > 8). Participants were randomly assigned to a relaxation-based exercise group (REG, n = 24) or a waitlist control group (CG, n

= 25). The REG received relaxation-based structured, supervised exercises for 4 weeks, while the CG awaited treatment. Assessments included the PDS, BAI, Beck Depression Inventory, Perceived Stress Scale-10, Pittsburgh Sleep Quality Index, and SF-12 Quality of Life Scale at baseline and 4 weeks post-intervention.
RESULT(S): Within-group analysis showed significant improvements in anxiety (P = 0.001), depression (P = 0.001), perceived stress (P = 0.001), and sleep quality (P = 0.001) for the REG. The CG showed decreased depression symptoms (P = 0.011) and improved sleep quality (P = 0.012). There were no significant group differences in quality-of-life outcomes (P > 0.05), though REG showed greater improvement in depression and perceived stress scores (P < 0.05).
CONCLUSION(S): Relaxation-based exercises can improve sleep quality in individuals experiencing post-earthquake stress, and reduce depression, anxiety, and perceived stress. This approach can be used as a novel rehabilitation model in preventive mental health for the community.

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20. **The experiences and perspectives of participating in a nature integrative rehabilitation programme when suffering from post-concussion syndrome: responses, gains, and impact from using enriched nature environments as a rehabilitation setting and integrating nature as rehabilitation means**

Authors: Sidenius, Ulrik;Corazon, Sus Sola;Varning Poulsen, Dorthe;Jul Olsen, Lisbeth and Kæreby, Natasha

Publication Date: 2025

Journal: International Journal of Qualitative Studies on Health and Well-Being

Abstract: Purpose: This study aims to understand the perspectives of individuals participating in a nature integrative rehabilitation (NIR) programme for post-concussion syndrome (PCS) in Denmark. The focus is on benefits, challenges, and impact of using enriched natural environments in rehabilitation.; Methods: A qualitative approach was employed, utilizing semi-structured interviews with 23 participants who completed a 10-week NIR programme in a therapy garden. Thematic analysis was conducted to identify key themes and patterns in participants' experiences.; Results: Participants reported enhanced emotional and sensory engagement with natural environments, leading to decreased PCS symptoms. The structured nature integrative activities promoted present-moment awareness, relaxation, and physical activity, which were valued by the participants. The facilitators' ability to adapt activities to individual needs was crucial to the perceived benefit of the programme. Group settings provided social support, reducing feelings of isolation.; Conclusions: NIR supports individuals with PCS by enhancing emotional well-being, reducing symptoms, and providing coping strategies. Alongside social support, the flexibility of the activities, allowing individuals to engage according to their symptoms and capabilities, is critical for rehabilitative outcomes. Future research should explore long-term effects and refine intervention protocols for implementation in the healthcare system to ensure the efficacy of NIR for people with PCS.

21. **Overground robotic exoskeleton vs conventional therapy in inpatient stroke rehabilitation: results from a pragmatic, multicentre implementation programme**

Authors: Tam, Pui Kit;Tang, Ning;Kamsani, Nur Shafawati Binte;Yap, Thian Yong;Coffey-Aladdin, Ita;Goh, Shi Min;Tan, Jean Pei Pei;Lui, Yook Cing;Lee, Rui Ling;Suresh, Ramaswamy and Chew, Effie

Publication Date: 2025

Journal: Journal of NeuroEngineering & Rehabilitation

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22. **Impact of virtual reality-based rehabilitation on poststroke depression: A systematic review and meta-analysis**

Authors: Wei, Ying;Tian, Hao;Ma, Cungen and Song, Lijuan

Publication Date: 2025

Journal: General Hospital Psychiatry

Abstract: Depression is the most common neuropsychiatric sequela of stroke, negatively affecting functional recovery and quality of life. Although virtual reality-based rehabilitation (VRBR) is an effective intervention in stroke rehabilitation, its efficacy in treating poststroke depression (PSD) remains unclear. To evaluate the treatment effect of VRBR on PSD. Six medical databases were systematically searched from inception to May 31, 2024, with an update on October 5, 2024. Potentially eligible studies were screened against the inclusion and exclusion criteria. Review Manager 5.4 and Stata 14.0 were used to conduct statistical analysis. Twelve studies published between 2015 and 2024 were included. The pooled results revealed that VRBR significantly reduced depression scores among poststroke patients SMD = −0.56, 95 % CI (−0.90, −0.23), P = 0.001]. Subgroup analyses suggested numerically greater improvements in patients with a mean age < 60 years and those receiving ≥20 intervention sessions, though between-subgroup differences were not statistically significant. VRBR may be a promising therapy for PSD. However, methodologically rigorous studies are needed to further confirm its efficacy and safety. PROSPERO, CRD42024550019. • Poststroke depression (PSD) impairs functional recovery and quality of life. • Virtual reality-based rehabilitation (VRBR) is a promising rehabilitation method. • This meta-analysis of RCTs examined the treatment effect of VRBR on PSD. • VRBR significantly improve PSD. • Age and treatment sessions potentially affect the efficacy of VRBR.

23. **Respiratory physiotherapy in intensive care: A survey investigating respiratory physiotherapy interventions for mechanically ventilated patients in the intensive care unit**

Authors: Wood, Jackson;Chapman, Chantelle and Paton, Michelle

Publication Date: 2025

Journal: Australian Critical Care

Abstract: Physiotherapists play a key role in respiratory care for mechanically ventilated (MV) patients. Despite this, there is limited understanding of which interventions are commonly utilised to treat respiratory compromise in this cohort or what key barriers exist to their implementation. The aim of this study was to identify preferred respiratory physiotherapy treatments for MV patients across Australian intensive care units (ICUs) and comprehend key barriers to their application. A survey was sent to 145 of the 183 identified Australian ICUs listed in the Australian and New Zealand Intensive Care Society's Centre for Outcome and Resource Evaluation report. The survey encompassed demographic details, queried the frequency of use for six interventions (using a Likert scale from "often" to "never"), and explored treatment indications, methods, and barriers through multiple-choice responses. Results were presented as proportions (counts and percentages) and relative frequencies (RFs). Group differences were assessed using chi-squared tests, with a p value <0.05 indicating significance. Of the 69 responses (48% response rate), most were from level 3 (67%, n = 46/69) public (83%, n = 57/69) ICUs, with <2.0 full-time equivalent physiotherapy staffing (49%, n = 34/69) for 5–15 beds (44%, n = 30/69). Manual techniques (e.g., percussions and vibrations) were the most common respiratory physiotherapy treatments, with 54% of respondents using them "often", while intrapulmonary percussive ventilation was the least common, used "never" by 83%. Variation was noted in the application of hyperinflation. Calculation of maximal inspiratory pressure before completing inspiratory muscle training was common (74%). Overall, clinician competence (RF = 28%), confidence (RF = 21%), and access to clinical guidelines (RF = 20%) were the main barriers to implementing techniques, with barriers generally more prevalent among respondents from smaller, private, level 1 and 2 ICUs. While physiotherapists prioritise respiratory treatments for MV patients, significant variability exists in practice. This survey highlights the need for standardised guidelines, enhanced educational resources, and the requirement to support colleagues in smaller and private ICUs to ensure consistent, effective management of MV patients throughout Australian ICUs.

24. **Effects of Acupuncture Combined with Conventional Rehabilitation Training for Patients with Post-Stroke Dysphagia: A Randomized Controlled Trial.**

Authors: Xu F.;Zhang Y.;Su X.;Dai F.;Ye Y.;Ling M.;Hu P. and Cheng, H.

Publication Date: 2025

Journal: Journal of Multidisciplinary Healthcare

Abstract: Objective: Stroke is a significant global public health challenge. Evidence suggests that acupuncture contributes to the treatment and rehabilitation of post-stroke dysphagia (PSD), effectively improving swallowing function and enhancing patients' quality of life. This study aimed to examine the effects of acupuncture combined with conventional rehabilitation training (CRT) on swallowing function, neurotransmitter levels, nutritional status, and swallowing-related quality of life in patients with PSD.
Method(s): Following screening, 90 patients with PSD were randomly assigned to either the intervention group (receiving acupuncture combined with CRT) or the control group (receiving CRT only). Both groups underwent treatment six times per week for four weeks. Primary outcome measures included the standardized swallowing assessment (SSA), the modified Mann assessment of swallowing ability (MMASA), the water swallowing test (WST), and 5-hydroxytryptamine (5-HT) levels. Secondary outcomes assessed swallow-ing-related quality of life and nutritional indicators.
Result(s): Compared with baseline data, both groups showed improvements after 2 and 4 weeks of treatment, with reductions in SSA scores and increases in MMASA, hemoglobin (HB), albumin (ALB), serum total protein (STP), swallowing quality of life questionnaire (SWAL-QoL) scores, and WST performance. And the intervention group exhibited significantly greater improvements than the control group at the fourth week. Notably, the 5-HT levels in the intervention group were significantly higher than those in the control group after 4 weeks (362.44+/-88.63 vs 310.16+/-86.79, P = 0.006).
Conclusion(s): A 4-week course of acupuncture combined with CRT demonstrated significant benefits in enhancing swallowing function, neurotransmitter levels, nutritional status, and quality of life in patients with PSD.

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25. **Long-term impact of physiotherapy attendance on rehabilitation of workers with low back pain**

Authors: Zhang, Liangping and Pan, Lei

Publication Date: 2025

Journal: Pain

New / Updated Guidance from NICE

26**. Transforming rehabilitation for neurological conditions**

National Institute for Health and Care Excellence

Publication Date: 2025

Through our new draft guidance, we aim to address variation in care by recommending a standardised approach to rehabilitation.

A key recommendation is for there to be a single point of contact for people with chronic neurological disorders, including ensuring there are complex case managers within each of the 42 integrated care boards in England. These specialists would coordinate care across health, social care and third-sector organisations, ensuring people receive the rehabilitation services they need. This would mean smoother transitions between services and less chance of falling through gaps in care – ultimately leading to better outcomes and improved quality of life.

Consultation is open until 5pm on Tuesday 20 May 2025.

27**. Preparing for CQC assessment: a resource for principal occupational therapists**

Local Government Association

Publication Date: 2025

This resource was developed following consultation with principal occupational therapists (POTs) from the national and ADASS regional POT networks. It incorporates learning and tips from POTs who have gone through Care Quality Commission (CQC) assessment.

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28. **New digital platform to support occupational therapy in Moray**

Author: Mark Say

Publication Date: 2025

UK Authority

A new digital system is under development to support the delivery of occupational health services in the Moray region of Scotland. The project should help occupational therapists, because they will be able to do more of the work they trained for, instead of office admin and chasing information. It should be better for citizens, because they will be able to get the support they need, faster, and it will create an asset that Open Medical can take to other services supported by DHI’s international networks

29. **Generative artificial intelligence in physiotherapy education: great potential amidst challenges- a qualitative interview study**

Authors: Lindbäck, Yvonne; Schröder, Karin; Engström, Torkel; Valeskog, Karin; Sonesson, Sofi

Publication Date: 2025

Journal: BMC Medical Education

This study explored physiotherapy students' experiences with generative AI (GAI) in education. Through focus groups, students highlighted GAI's value in enhancing learning, clinical reasoning, and problem-solving. They viewed it as a helpful, personalized study aid but raised concerns about over-reliance, learning quality, and ethical use. Students emphasized the need for critical thinking and clear guidelines. Looking ahead, they saw potential for GAI to support healthcare delivery but warned of risks like profit-driven models and knowledge gaps, underscoring the need for organizational support and thoughtful implementation.

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30. Health informatics education resource for AHPs to launch in 2025

Author: Jordan Sollof

Publication Date: 2025

Digital Health

A health informatics education resource from the Chartered Society of Physiotherapy (CSP) will launch in 2025 for allied health professionals (AHPs). The resource aims to improve knowledge and enable better use of data and digital across AHP services. As part of the design process, CSP are looking for 20 AHPs, students and support workers to test the resource

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31. **Transformational leadership in physical therapy: a qualitative study**

Authors: Ulrich JW.

Publication Date: 2025

Journal: Leadership in Health Services

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