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The value of work simulation rehabilitation: A qualitative study

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ARTICLE

Australian Health Review

Client and staff perspectives regarding effective work injury rehabilitation

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ABSTRACT

Objective. Early, targeted treatment is critical to recovery and overall health following a work-related illness or injury. Limited research has explored the important dimensions of work-specific injury rehabilitation from both client and staff perspectives. Methods. A total of 17 participants (13 clients with work-related injuries, 3 physiotherapists, 1 project manager) involved in a unique program providing allied health treatment in combination with return-to-work services, were interviewed. Data were analysed using reflexive thematic analysis. Results. Four themes were generated: (1) a biopsychosocial approach to rehabilitation; (2) a self-paced environment

Determining **FUNCTIONAL** Capacity
KJK Legal Seminar 20 August 2025

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Your Way Back To Work

Compensable setting is an artificial situation where you are made to trust people quickly about major life decisions

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Why do we need to determine functional capacity?

- The researchers estimate that in Australia, in the 13 years from 2004 to 2016, unemployment and underemployment directly resulted in more than 3,000 Australians dying by suicide, an average of 230 a year

- They said their findings had "profound" political, economic, social and legal implications, and demanded a re-evaluation of our economic policies

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What do we (people) need to know to establish capacity?

Work

Person

Skills & Competencies

Do you have the technical and ***soft** skills the job requires?

Interests & Motivation

Does the work align with what you enjoy doing?

Values & Work Style

Does the job match your values (e.g., teamwork, independence)?

Physical & Cognitive Demands

Can you meet the physical, mental and psychosocial requirements of the job?

- **Core skills**
- **Interpersonal skills**
- **People skills**
- **Essential skills**
- **Employability skills**
- **Transferable skills**
- **Human skills**
- **Power skills (a newer term)**

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005)
Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit.
Edwards, J. R. (1991)
Person-job fit: A conceptual integration, literature review, and methodological critique.
Kristof, A. L. (1996)
Person-organization fit: An integrative review of its conceptualizations, measurement, and implications.
Holland, J. L. (1985)
Making Vocational Choices: A Theory of Vocational Personalities and Work Environments.

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What are some challenges in measuring real function?

Artificial Environment
FCEs are performed in a clinic or lab, not on an actual job site.
Real workplaces have dynamic conditions (noise, time pressure, multitasking, equipment) that can't be fully replicated.

Short Duration vs. Real Workday
FCEs typically last a few hours or a day, while real jobs require sustained performance over weeks or months. Fatigue, endurance, and cumulative strain may not be accurately captured.

Motivation and Effort Variability
Participants may underperform (fear of re-injury) or overperform (to prove ability), which can skew results. Real work motivation is influenced by pay, job security, and social factors—absent in FCE.

Limited Contextual Factors
FCEs don't account for psychosocial elements like work culture (risk appetite), assistance/support, adaptability/resilience or stress. They also don't capture ergonomic setups and adaptive equipment that might be available on the job.

Task Simulation vs. Actual Job Tasks
Complex, multi-step processes or cognitive demands are hard to replicate.

Predictive Validity
FCEs predict capacity, not actual performance under real-world conditions. Return-to-work success depends on many factors beyond physical ability (e.g., pain tolerance, coping strategies).

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BIOPSYCHOSOCIAL APPROACH

Your Way Back To Work

Physiotherapy + Psychology + Rehabilitation Counselling

We see people that are 15 months (457 days) post injury; 95% psychological component

Broad targets - Part 1

Physical Demands Level Definitions

Sedentary Work: Lifting 10lbs. (4.5kg) maximum and occasionally lifting and / or carrying such articles as dockets, ledgers, and small tools. Although a sedentary job is defined as one, which involves sitting, as certain amount of walking and standing are required only occasionally, and other sedentary criteria are met. Pushing up to 2kg force and pulling up to 2kg force occasionally at waist level.

Light Work: Lifting 20lbs. (9.1kg) maximum with frequent lifting and / or carrying of objects weighing up to 10lbs. (4.5kg). Even though the weight lifted may be only a negligible amount, a job is in this category when it requires walking or standing to a significant degree or when it involves sitting most of the time with a degree of pushing and pulling and / or leg controls. Pushing up to 5kg force and pulling up to 4kg force occasionally at waist level.

Medium Work: Lifting 50lbs. (22.7kg) maximum occasionally with frequent lifting and / or carrying of objects weighing up to 25lbs. (11.3kg). Pushing up to 12kg force and pulling up to 10kg force occasionally at waist level.

Heavy Work: Lifting 100lbs. (45.5kg) maximum occasionally with frequent lifting and / or carrying of objects weighing up to 50lbs. (22.7kg). Pushing up to 24kg force and pulling up to 20kg force occasionally at waist level.

Very Heavy Work: Lifting 100+ lbs. (45.5 + kg) maximum occasionally with frequent lifting and / or carrying of objects weighing up to 50 + lbs. (22.7 + kg). Pushing up to 34kg force and pulling up to 28kg force occasionally at waist level.

Occasional:	0 - 33% of an 8 hours' day, (1 lift every 30 minutes)
Frequent:	34 - 66% of an 8 hours' day, (1 lift every 2 minutes)
Constant:	67 - 100% of an 8 hours' day, (1 lift every 15 seconds)

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Broad targets – part 2

Physical function	Can	With modifications	Cannot
Sitting:	○	◉	○
Standing/walking:	○	◉	○
Kneeling/squatting:	○	◉	○
Carrying/holding/lifting:	○	◉	○
Reaching above shoulder:	○	◉	○
Bending:	○	◉	○
Use of affected body part:	○	◉	○
Neck movement:	◉	○	○
Climbing steps/stairs/ladders:	○	○	◉
Driving:	◉	○	○

Mental health function	Not affected	Partially affected	Affected
Attention/concentration:	◉	○	○
Memory (short term and/or long term):	◉	○	○
Judgement (ability to make decisions):	◉	○	○

Comments (e.g. details of capacity or limitations that will assist in identification of suitable duties)

avoid heavy lifting, bending and repetitive tasks. work with symptomatic limits and take regular rest breaks. maximum lifting <5kg.

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Broad targets – part 3

Patient should avoid sustained forward-leaning postures, repetitive bending or lifting, and lifting objects over 10 kilograms from low positions more than occasionally. Patient is currently suited for light-duty work. However, the role may occasionally involve tasks that fall into the medium physical demand category, particularly during patient transfers in an acute ward setting, which can be unpredictable. It is recommended that Patient exercise caution during transfers and seek assistance if there is concern about the weight or safety of the transfer. A less physically demanding physiotherapy setting—such as an upper limb clinic or outpatient services—would be more appropriate. The back condition may limit Patient's ability to perform across all PT environments.

avoid *(verb)*: to keep away from or prevent oneself from engaging in something.
repetitive *(adjective)*: involving or characterized by repetition, especially when tiresome or unnecessary.
low positions *(noun phrase)*: body postures close to the ground, such as bending, squatting, or kneeling.
unpredictable *(adjective)*: not able to be foreseen or anticipated; subject to sudden change or uncertainty.
exercise caution *(verb phrase)*: to act carefully and deliberately to avoid risk or harm.
concern *(noun)*: a matter that causes worry, interest, or attention due to potential risk or importance.

Comparison – Lifting

Comparison – Flexion + Fine Motor

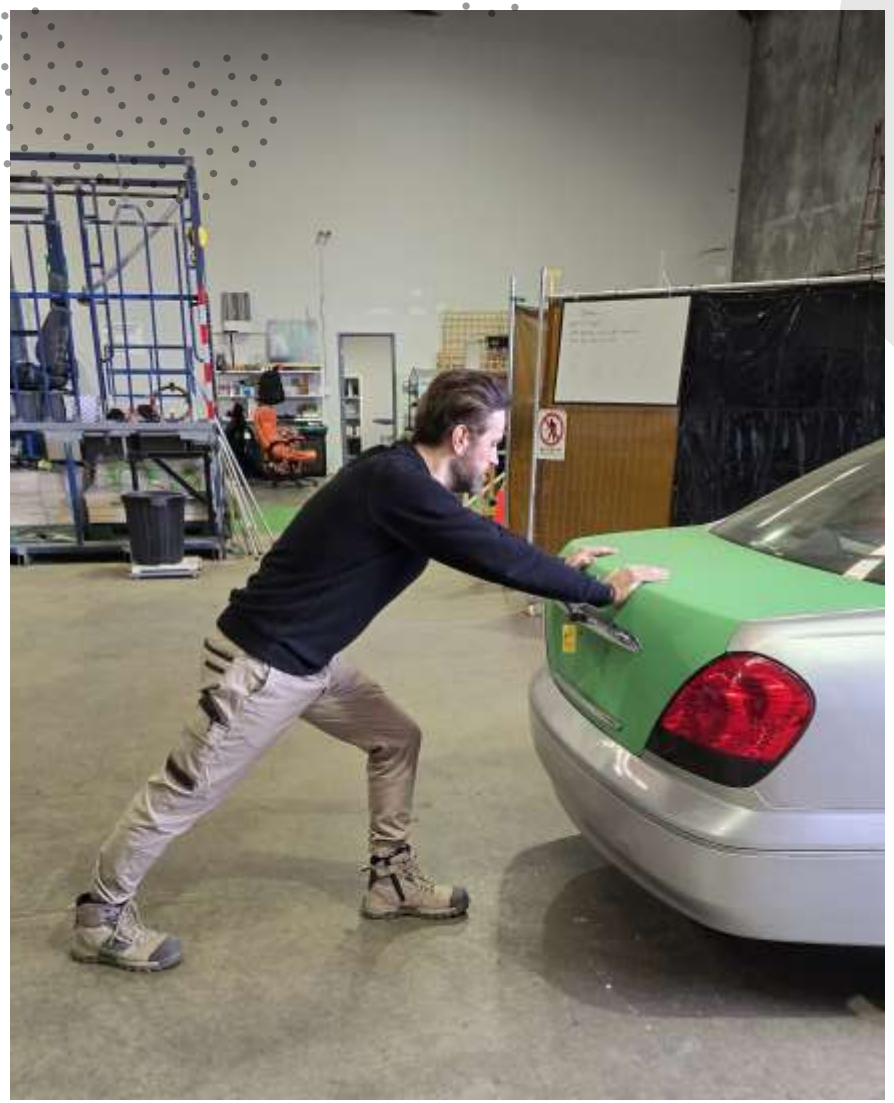
Comparison – Reaching above head




Comparison – Push/Pull

Comparison – Climbing

Apples and Oranges



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Aptitude

CURRENT MENTAL HEALTH (DEPRESSION, ANXIETY & STRESS SCALE)

Depression Levels	Normal
Anxiety Levels	Normal
Stress Levels	Moderate

GENERAL INTELLECTUAL ABILITY (GENERAL REASONING TEST ADMINISTERED ELECTRONICALLY)

Verbal Reasoning	Likely to be as able as many staff in general level employment to understand fairly complex verbal concepts and ideas, to be able to perceive the relationships between these and to deduce their logical consequences. He might, however, experience a little difficulty fully appreciating complex (verbal) ideas and his ability to formulate logical verbal arguments is likely to be a little weaker than that of other staff.	39th percentile Lower end of the average range
Numerical Reasoning	Likely to be as able as many people in general level employment to perceive the logical patterns and relationships between numbers. He may however experience a little more difficulty than some in understanding the rules that govern these patterns and in deducing the consequences of them.	39th percentile Lower end of the average range
Abstract Reasoning	Likely to be as high as that of many staff in general level employment. While he should be able to use pure logic (i.e., without calling upon other information such as his vocabulary, knowledge of mathematical operations, etc.) to deduce the consequences of such patterns, he would be expected to experience some difficulty correctly deducing the logical consequences of the more complex patterns and relationships.	31st percentile Lower end of the average range

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Aptitude

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CASE STUDY 1

Painter - fall from roof

Injury to hip, foot and lower back, post-concussion

Sleeping on sofa - 12+ months

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CASE STUDY 2

Driver - collision

Injury to head, vestibular issues, vertigo, POTS, hip, shoulders, lower back and ribs

With permission

CASE STUDY 2

Driver - collision

Injury to head, vestibular issues, vertigo, POTS, hip, shoulders, lower back and ribs

With permission

CASE STUDY 2

Driver - collision

Injury to head, vestibular issues, vertigo, POTS, hip, shoulders, lower back and ribs

With permission

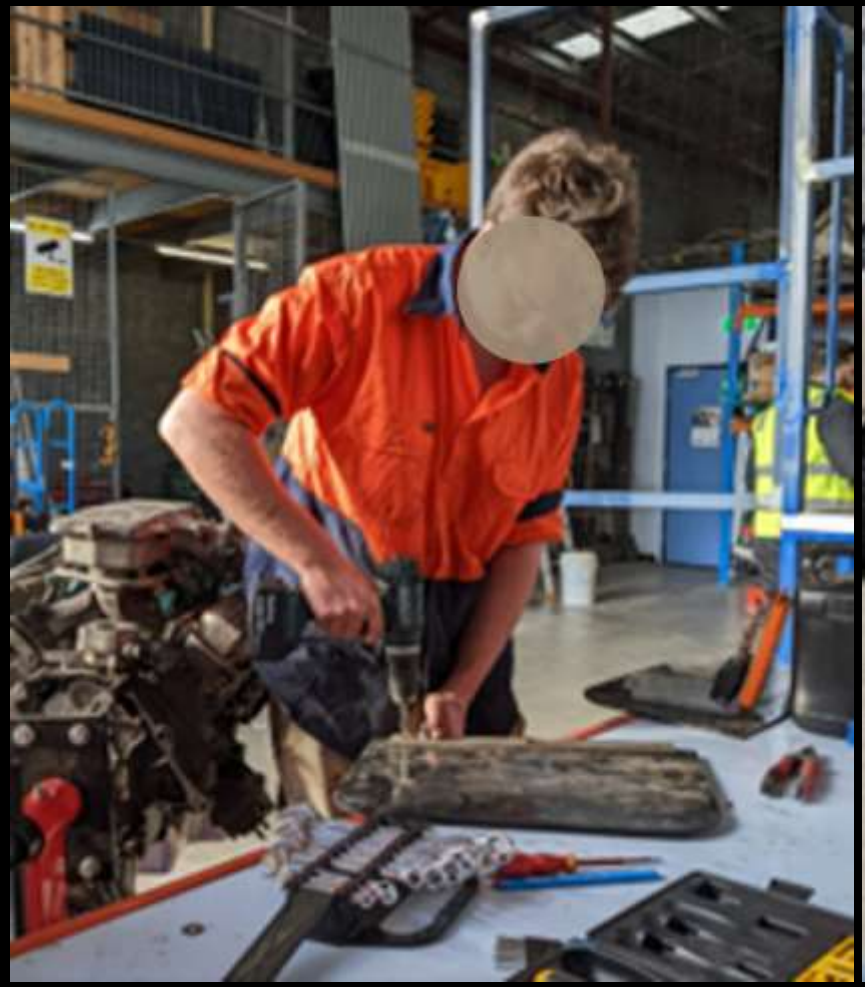
CASE STUDY 3

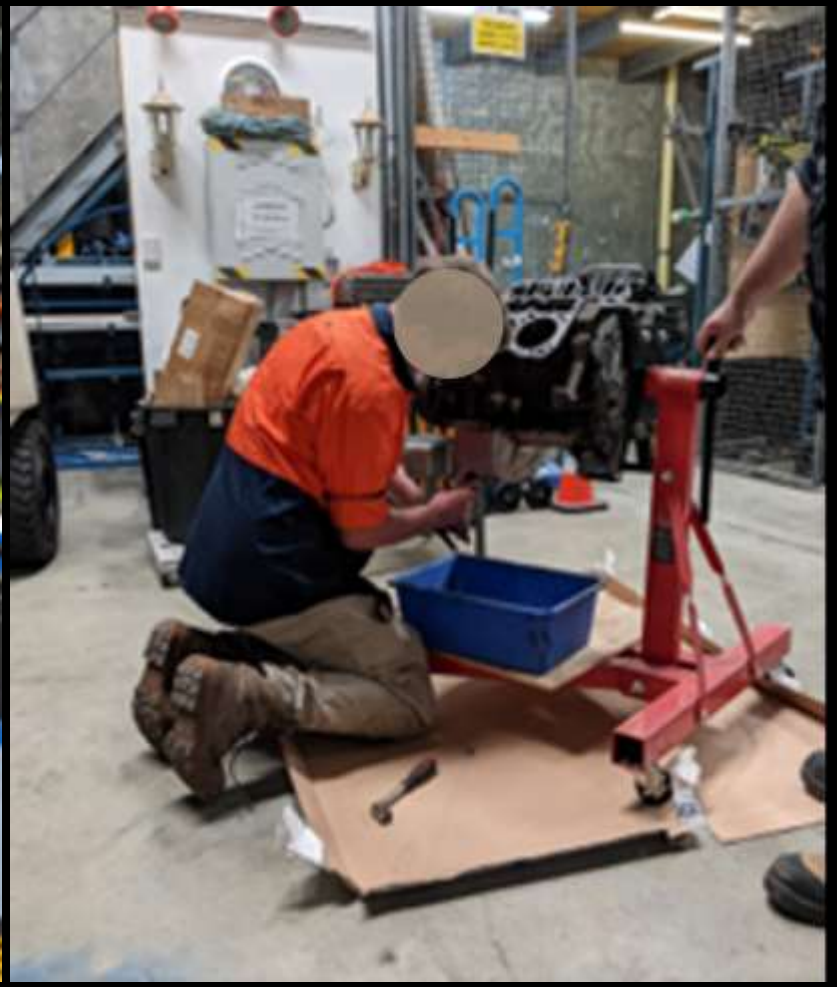
LSA collision

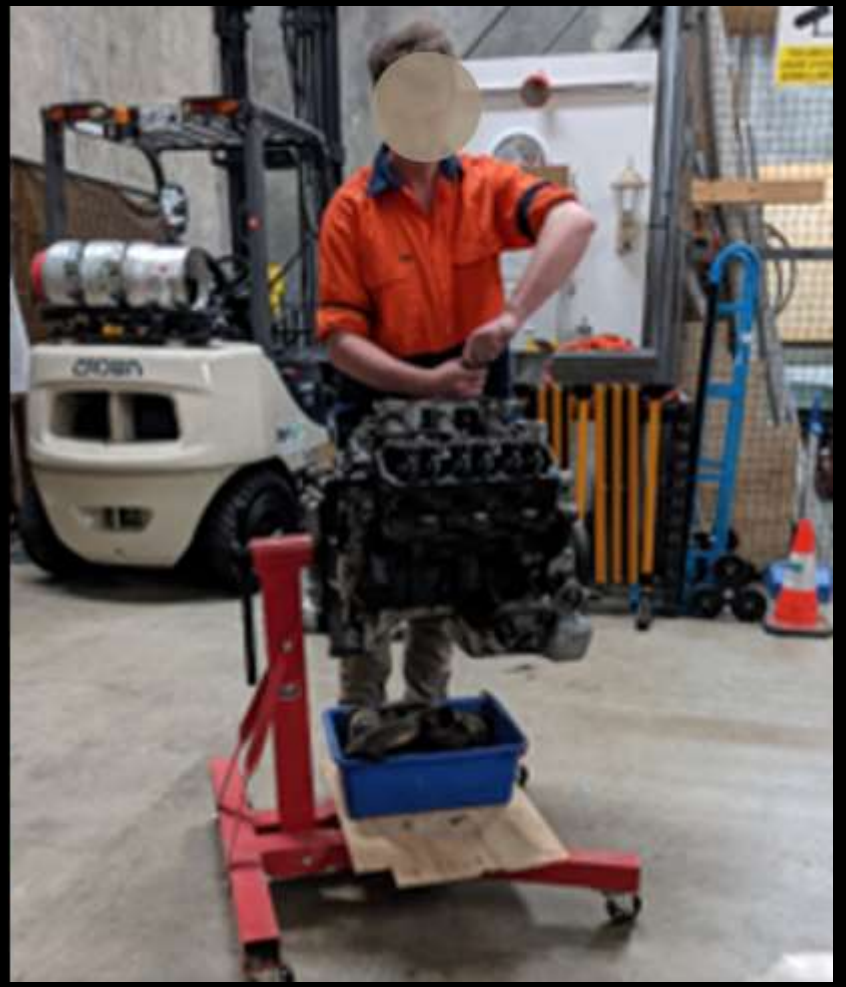
With permission

CASE STUDY 4

LSA collision

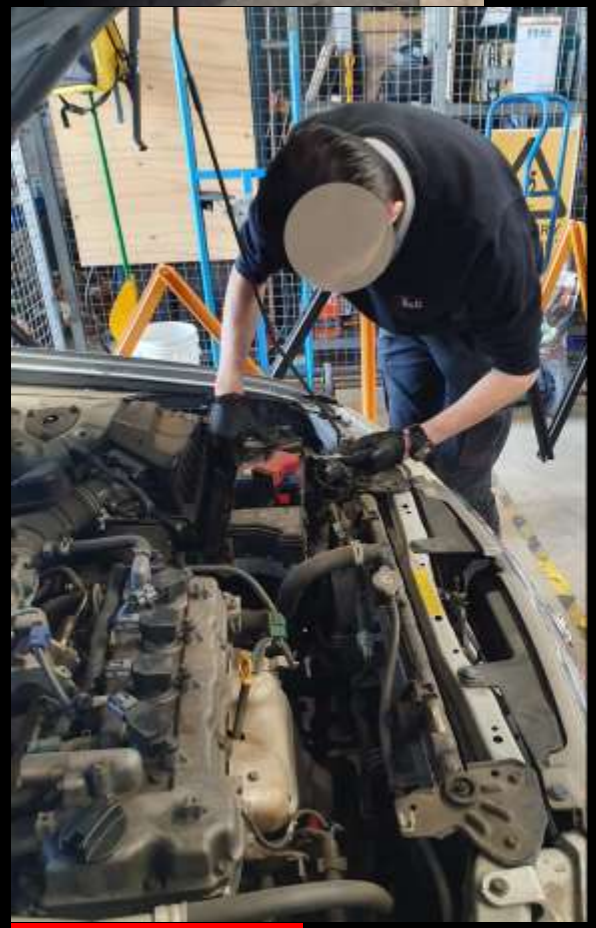






CASE STUDY 5

LSA collision



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CASE STUDY 6

Carpenter - CRPS

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CASE STUDY 7

CRPS - lower limbs

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CASE STUDY 5

CRPS - lower limbs

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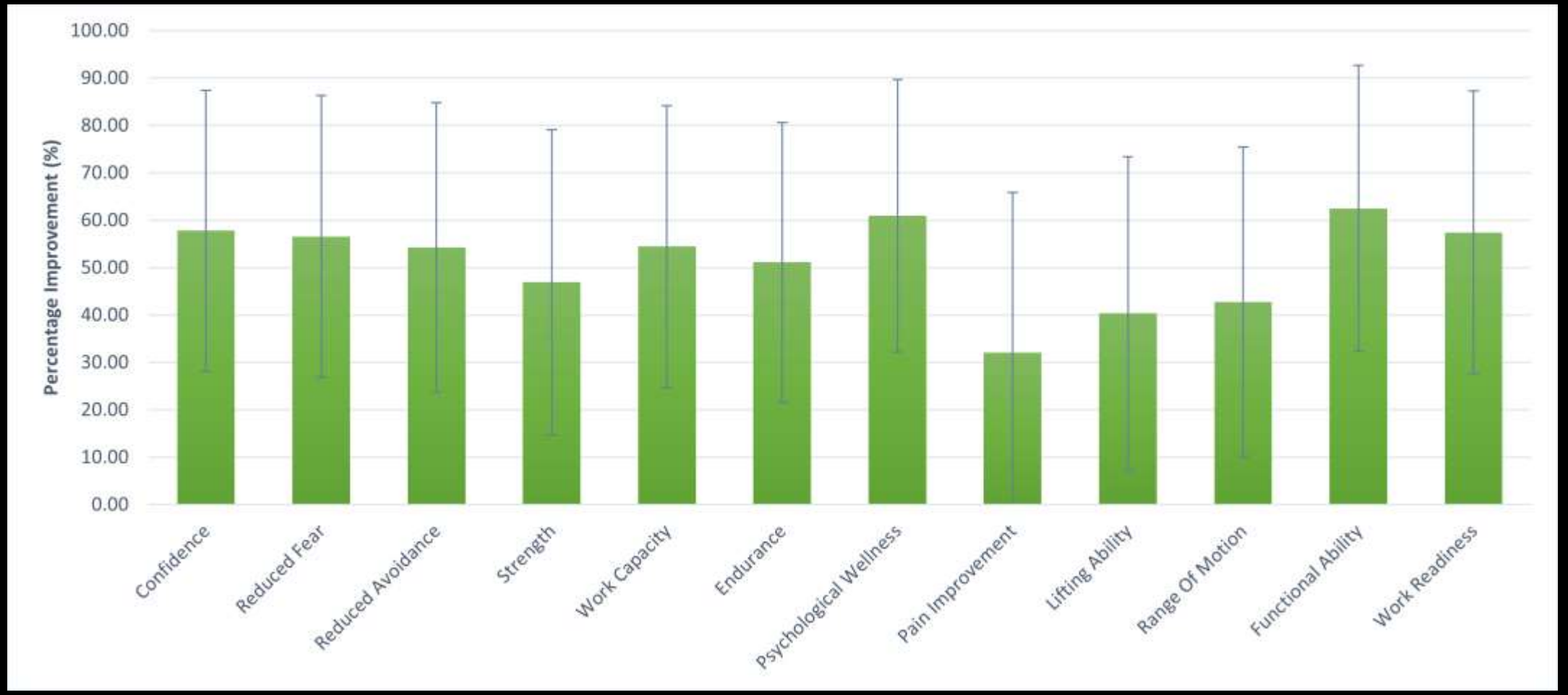

Current data (approx. 6 weeks)

Understanding the differences

Aspect	Standard FCE	WorkGain Simulation Model	Advantages of work specific approach
Depth of Assessment	Snapshot of physical ability	Longitudinal, real-world observation	More accurate, holistic data
Realism of Tasks	Generic tasks (boxes, weights)	Actual or simulated job tasks	Better job relevance and predictive validity
Environmental Factors	Controlled, clinical setting	Includes tools, surfaces, weather, noise, vibration	Reflects true workplace conditions
Use of Tools & Machinery	No power tools, machinery, or vibration	Includes relevant tools, machinery, and environmental stressors	Simulates actual job demands
Surface & Conditions	Flat, dry, indoor surfaces	Uneven surfaces, mud, rain, slippery floors, heat etc.	Captures environmental risks and variability
Fatigue & Endurance	Not observed over time	Monitored across multiple sessions	Identifies sustainability of work
Cognitive Demands	Not assessed	Included (attention, memory, decision-making)	Captures full biopsychosocial profile including personality, resilience adaptability
Psychological Resilience	Not assessed	Observed (ability to persist through barriers)	Assesses motivation and coping under stress
Vocational Fit	Not integrated	Assesses interest, motivation, and suitability for pre-injury or alternative roles	Supports tailored employment planning
Outcome Quality	Limited extrapolation	High validity for employment decisions	Reduces risk of failed placements or re-injury
Return on Investment			Saves cost long-term by improving return to work and rehabilitation success and reducing duration of compensation claims

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