



Abstracts and guest editorial from the HFESNZ Conference 2025

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Guest Editorial: NZ Journal of Health and Safety Practice

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On October 2nd and 3rd Human Factors and Ergonomics Society of New Zealand (HFESNZ) held its 2025 conference at the George in Ōtautahi Christchurch. Human factors and ergonomics (HFE) is concerned with understanding the interactions between people and the things around them and applying this to design systems for optimal well-being and performance. HFE is multi-disciplinary, and principles are applied across tasks, jobs, products, environments, and industries which makes for interesting and stimulating conference conversations.

The 2-day conference followed the HFESNZ hosted HFE in Healthcare Symposium on October 1. To align these events, the first day of the conference began with a healthcare-focussed session with Professor Paul Bowie, our guest from NHS Scotland, giving a keynote presentation. Paul's expertise spans patient safety science, medical education and HFE and his address linked these domains providing excellent insights for us in Aotearoa as we work to embed an HFE approach in healthcare. Arranged by industry themes, other sessions included forestry, work-related musculoskeletal disorders and transport related topics.

The conference theme of *Bouncing Back-Leaping Forward* helped participants to reflect on the strong base of HFE while thinking about what we can offer in contemporary and future work. This was highlighted in the keynote address given by Professor Rob Lindemann (University of Canterbury) who discussed virtual reality, its applications and potential pitfalls and followed up by a series of presentations on Artificial Intelligence. The conference was rounded out by a 'workplace' session covering neurodivergence, working from home, SME health and safety and team effectiveness.

An important part of any HFESNZ conference is time and space to connect with people and discuss cross-industry and cross-specialism alignments and experiences to grow HFE knowledge, spark collaboration and innovation. This was facilitated by a welcome social event, interactive sessions, breaks and a delicious conference dinner!

This edition of New Zealand Journal of Health and Safety Practice includes some of the abstracts from the conference programme. Please contact the listed authors if you would like to know more about their work and see hfesnz.org.nz to join the HFE conversations.



Fade and Thriving in HFE: Perceptions and Directions for the Discipline

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As the Human Factors and Ergonomics Society of New Zealand (HFESNZ) marks its 40th anniversary, it is timely to reflect on the discipline's contribution, present state, and future directions. This review sought to gain a clear picture of how leaders in the global HFE community perceive the current state of the field and its future trajectory. In doing so, it aimed to gather insights to inform the future of HFE research and practice.

A structured review was conducted across five databases (ScienceDirect, Scopus, Taylor & Francis Online, Sage Journals, and Google Scholar) from January 2024 to September 2025. Peer-reviewed commentaries, perspectives, and editorials were included, while grey literature and non-English publications were excluded. Sixteen papers met the inclusion criteria and were thematically analysed under three categories: perceived impact, contemporary challenges, and future directions.

The review revealed two clear contrasting perspectives. Some experts argued that HFE is fading, lacking relevance, losing ground to other fields (e.g., I-O, H&S, HCD), and is in decline. Conversely, others maintained that it is thriving, with broad but often unacknowledged influence in safety-critical industries. Across both "fading" and "thriving" perspectives, HFE's knowledge base was acknowledged, but many noted its impact has been limited.

The majority agreed that existential risks may arise if the field fails to establish a clear identity in the 21st century, demonstrate its value, modernise its methods, and take leadership in emerging areas such as AI. With respect to the latter, we propose an agenda for the field in the domain of AI safety. Although numerous individual commentaries and opinion pieces exist, no prior work has compiled and synthesised these viewpoints. This review provides the first integrated synthesis and is the first to identify AI safety as a research and practice agenda for HFE.

Keywords: Human Factors and Ergonomics; Contemporary Challenges; Future Directions; Human–AI Interaction.



Trust, workload and wellbeing in an age of AI: a longitudinal study in telehealth

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A medium sized organisation is the subject of a longitudinal study approved by the University of Canterbury Human Ethics Committee. The organisation delivers 32 distinct services. All kaimahi were eligible to participate, with recruitment conducted via internal newsletters. We examine the impact of AI integration on kaimahi (employee) workload, trust and wellbeing using a longitudinal design over three phases; baseline (complete), post introduction (September) and sustained introduction (November). Participants include 45 kaimahi, 28 females, ranging in age from under 25 to over 65. Participants completed the NASA Task Load Index (NASA-TLX), the Eudaimonic Wellbeing Scale, and the Trust in Automated Systems Scale using a 5-point Likert scale. Those who consented also engaged in semi-structured interviews, beginning with specific prompts and expanding into exploratory dialogue about the impact of AI in the workplace. Additionally, objective productivity metrics such as average call duration, time to answer, and after-call work, will be compared with subjective workload, trust and wellbeing scores. Qualitative results at baseline are: workload demand (M 3; 0.67), trust in AI systems (M 3.35; SD 0.95), and wellbeing scores (M 3.8; SD 1). Emerging themes from qualitative data analysis include perceptions that organisational communications and training on AI is insufficient, existing bias in participant views about AI (bimodal, positive or negative), and concerns about the unique context of the organisation (clinical standards and privacy concerns).

Key words: Telehealth. Human Factors. Workload. Trust. Wellbeing.



Optimising road user behaviour at passive rail crossings: enhancing safety

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Between 2010 and 2020, 52 fatal and serious motor vehicle crashes occurred at rail level crossings (LC) in Aotearoa. Previous research indicates that 72% of these crashes occurred at LC's who's only control measures were 'STOP' or 'GIVE WAY' signs.

The research discussed here covered two streams of work, the first the capturing individual driver behaviour (including gaze direction) of a small group of private motor vehicle drivers. The second stream was an observational study that captured external driver behaviour from a much broader set of road users.

The ultimate goal of the research was to provide an evidence-base to improve guidance for passive LC's which only had controls like signs or delineation (compared to active LC's, with barrier arms, warning lights and bells) to reduce the likelihood of vehicle-train crashes.

Another focus was to fill the gap in knowledge about the behaviour of drivers turning into these passive LC's from a road running parallel to the track. Several hypotheses were developed from existing literature and recent crash analyses. These were tested using data from a mixture of cameras, radars, and lidars, which captured drivers head turning behaviour, vehicle speeds, and stop sign compliance. This data was collected at six LC's leading to a total of 3,362 observations.

The results of the second stream showed that almost half (47%) of drivers failed to come to a complete stop. From this a series of recommendations made to KiwiRail to improve driver behaviour through better design.

Keywords: Driver behaviour, Level Crossings



The role of co-worker support in shaping task-specific AI chatbot use

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As artificial intelligence (AI) continues to shape the future of work, organisations are increasingly implementing AI-powered chatbots to support employees and stay ahead of competitors. These chatbots, such as the publicly available ChatGPT, utilise natural language processing to engage in human-like text conversations, with the capability to assist in a variety of work tasks beyond simple automation. Despite the growing use of these tools, little is known about how employees interact with AI in practice, and how such interactions may be influenced by the availability of coworker support. Therefore, this study aims to investigate employees' post-adoptive use of AI chatbots by understanding the social context in which they are used. Drawing on person-group fit theory, we will examine how the compatibility (congruence) between employees' needs for coworker support and the support they actually receive influences task-specific chatbot use. This considers use categories ranging from routine/transactional tasks (e.g., grammar checks) to more interpersonal and context-dependent tasks (e.g., decision-making support). The desire for coworker support may influence AI use, depending on the complexity of the task and the degree of social reciprocity it requires. Data will be collected via an online survey, distributed to individuals employed within organisations that provide access to AI chatbot(s). Measures will include perceived and desired coworker support (instrumental and emotional), frequency of chatbot use across five task types, and job satisfaction. Additionally, the moderating effects of perceptions of chatbot usefulness and ease of use, as outlined in the Technology Acceptance Model (TAM), will be examined. By integrating person-group fit and technology acceptance theories, this study provides a novel understanding of how coworker support dynamics shape practical AI use and overall job satisfaction. Findings will extend knowledge on the social drivers of applied AI chatbot use, highlighting both compensatory and autonomy-seeking patterns in AI use at work.

Keywords: AI Chatbots, Co-worker Support, Use Behaviours, Human-AI Interaction



Bridging human factors and occupational hygiene to address exposure control failures

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Carcinogens, respiratory hazards, and noise make up 38% of the total burden of work related harm in New Zealand. Despite there being available methods of controls to minimise exposures, uptake remains poor. According to the hierarchy of controls, engineering controls are more effective than administrative controls or personal protective equipment. However, where a control requires worker behaviour to use it properly this can result in low uptake and performance. Behavioural obstacles such as workflow disruption, low risk perception of “invisible” hazards, and poor system usability undermine control effectiveness. From a human factors perspective, these issues speak to interface design, task compatibility, and cognitive framing. Interventions that integrate HFE principles (co-designed controls aligned with workflow, real-time exposure feedback, and behaviourally-informed communication) have potential but lack robust evaluation in real-world New Zealand contexts. There is opportunity for collaboration between occupational hygiene and HFE disciplines to re-engineer controls for usability, acceptance, and sustained use. This presentation will synthesize occupational hygiene literature, New Zealand exposure data, and HFE frameworks to spark discussion on next-steps. How might human-centred design, context-aware tools, and behaviourally informed interventions bridge the gap between control efficacy and real-world adoption? Your input will help frame pilot strategies for projects aimed at enhancing occupational health in New Zealand construction and manufacturing sectors.

Keywords: Occupational Hygiene, Human Factors, Control Usability, Collaboration



Managing organisational AI readiness, adoption and integration: Managerial perceptions of algorithmic and generative AI

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Generative and algorithmic Artificial Intelligence (AI) in organisational settings is rapidly reshaping the work environment (Hartley et al., 2024). While research has examined cost–benefit analyses, ethical implications, and competitive advantages of early AI adoption, far fewer studies address the challenges of managerial and employee attitudes, job performance, and readiness for AI integration (McElheran et al., 2024; Uren & Edwards, 2023). Understanding both managerial and employee perspectives is crucial to successful implementation (Lichtenthaler, 2022). Although employees in tech-forward organisations express a willingness to adopt AI to enhance work–life balance, demand varies across industries (Berman et al., 2025). Managers’ perceptions remain underexplored despite evidence highlighting that managerial endorsement can increase employee AI adoption by 79% (Berman et al., 2025). Managerial buy-in may be a significant factor in reducing the variability in readiness for AI adoption in the workforce; therefore, it is worth examining. Thus, the purpose of this study is to investigate managerial perceptions of AI, specifically the perceived effectiveness of augmented AI in improving job performance and productivity, as well as the availability of organisational infrastructure, including resources and training, to facilitate AI adoption. It is hypothesised that positive perceptions of AI effectiveness in improving job performance and productivity, along with positive perceptions of available organisational infrastructure, predict greater managerial readiness for AI adoption. Drawing on the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, Employee Readiness for E-Business, AI adoption frameworks, and Readiness for Organisational Change, an online survey will be conducted to test the study hypotheses. Study findings aim to contribute valuable insights into the academic literature and practical organisational strategies regarding the impact of AI adoption and integration on management and the work environment.

Keywords: AI Adoption, AI Readiness, Managerial Perception, Organisational Support.



Human factors and ergonomics interventions for older workers' health and safety: evidence and future opportunities in Aotearoa

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In Aotearoa New Zealand, the population is ageing and the proportion of older people in employment has been steadily increasing overtime, attributed to better health, longer life expectancy, financial pressures (StatsNZ, 2025). Moreover, the government's Better Later Life– He Oranga Kaumātua 2019-2034 Strategy emphasises the benefits of prolonging workforce participation in supporting health and addressing workforce shortages (Davey et al., 2020). Considering the needs and capabilities of people in the workforce is a central tenant of the human factors and ergonomics (HFE) discipline. However, there has been limited attention paid to older workers' physical and psychological health and safety in the existing literature. The European Agency for Safety and Health at Work suggests tasks, systems, and equipment need to be adapted for many work roles to promote and enhance older worker well-being (EU-OSHA, 2018). However, evidence from the extant literature suggests that prevention strategies often focus on an individual (e.g., training and exercise) rather than the design of work systems (Robertson et al., 2021). Bentley et al. (2023) systematically reviewed the literature of workplace interventions that aimed to improve the physical and mental health and safety of older workers. This review found support for organisational and multi-level interventions as the most effective for preserving older worker well-being compared to individual-level interventions. However, there were only a small number of high-quality studies with limited evaluation and participatory approaches. Drawing on this review and applying it to the context of Aotearoa New Zealand, HFE opportunities for research and practice will be presented including optimising the fit between work/tasks and the older worker, considering the efficacy of participatory approaches to prevention and taking account of the changing landscape of work in the design of interventions.

Keywords: Older Workers, Work Related Musculoskeletal Disorders (WMSDs), Mental Health, Work Design

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Tōku Hoa: A wearable-integrated empathic digital companion for supporting mental wellbeing in young adults

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We present Tōku Hoa, a mobile mental health companion designed to support young men in Aotearoa New Zealand through short, context-aware, and empathic interactions. The system integrates passive sensing from smartwatches (e.g., heart rate variability, sleep, physical activity) with active user input (text or voice) to detect emotional states and deliver timely, low-intensity support. Key features include an always-available AI conversational agent, stress-triggered check-ins, AI-guided journaling, and lightweight goal tracking. The MVP was developed using an iterative design process informed by literature on digital mental health interventions and co-design sessions with young men and mental health professionals. The system's emotion detection engine, AffectLens, combines physiological and contextual signals with user history to personalize tone, timing, and content. We present a live or recorded demonstration of the core features and outline the rationale behind interaction design, tone personalization, and safety constraints (e.g., handling sensitive topics without diagnostic language). Preliminary feedback from youth advisors emphasized the importance of autonomy, cultural resonance, and minimal intrusion. The demo invites feedback on user interaction strategies, personalization models, and the system's fit within broader youth mental health support frameworks. This work contributes to ongoing efforts to design inclusive, scalable, and user-led mental health technologies.

Keywords: Mental Health, Digital Health, Empathic Agent, AI Interaction Design



Human-centric design and the evolving forest work environment

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Modern forestry is evolving rapidly through technological innovations in mechanisation and automation, navigating the complexity of balancing safety and productivity with the growing challenge of workforce shortages. Our workforce remains our most critical asset. Guided by the Māori proverb, “He aha te mea nui o te ao? He tangata, he tangata, he tangata!” (‘What is the most important thing in the world? It is the people, the people, the people!’), we explore the integration of advanced technologies to reshape forestry careers that prioritise wellbeing and experience on-the-job. We'll share our insights into how we can do this at the micro scale (in training) and the macro scale (industry-wide solutions).

Video-based feedback was developed for logging machine operator training, demonstrating its potential to boost performance by enabling specific, timely, and content-rich feedback through motion analysis and reflective practice. In parallel, our neurophysiological research employing technology to reveal the interplay between human productivity, wellbeing, and forest environments is opening up new conversations about careers in nature. By integrating human-centric design with digital technology in novel ways, we can enhance operational efficiency, improve harvesting practices, and potentially mitigate workforce challenges. Together, they lay the foundation for a resilient, sustainable forestry industry in Aotearoa New Zealand and beyond.

Keywords: Human-Centric Design, Forestry, Workforce, Human Factors



Compliance: Cultivating trust and value in health & safety for New Zealand SMEs

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Despite decades of legislative effort, many New Zealand small and medium enterprises (SMEs) continue to underinvest in Health and Safety (H&S). This talk explores the systemic, cultural, and perceptual barriers that fuel this pattern, and proposes a human factors-led shift in approach. Drawing on frontline experience as Customer Service Manager at BWARE, a Health and Safety SaaS provider for SMEs, I argue that traditional compliance-based H&S models often fail to engage SMEs meaningfully because they ignore their realities: constrained resources, operational priorities, and scepticism about value.

Through a systems thinking lens, I unpack the “trust deficit” that SMEs hold toward H&S, rooted in its association with bureaucracy, cost, and disruption. Referencing Clive Lloyd’s call to end unproductive safety model debates, I advocate that the model matters less than the outcomes it produces. Instead of pushing prescriptive frameworks, we should partner with SMEs to co-design practical, human-centric solutions that align with their business goals.

Using human factors and ergonomics (HFE) principles, I show how BWARE reframes H&S as a lever for productivity, staff wellbeing, and business resilience. Central to this approach is the strategic use of “refined questions”: open-ended prompts that uncover pain points, build empathy, and co-create value-based solutions. These questions move beyond risk identification toward understanding how H&S can enhance operations.

This talk invites HFE professionals to shift from diagnosing safety problems to enabling SME potential. Trust is not gained through better systems alone. It is built through better questions, authentic listening, and offering solutions that SMEs perceive as both helpful and usable. In doing so, H&S becomes not just a compliance requirement, but a valued partner in the SME success story.

Keywords: Health and Safety, Small Medium Enterprise, Trust, Partnership



Evaluation and redesign of a post showering clean up task

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Habits and routines are typically the preferred choices when it comes to carrying out tasks as they are less cognitively demanding, less time consuming, and more efficient than imagining a different technique (Kahneman, 2011). Unfortunately, routines can also lead to resistance to change and become a performance shaping factor (Non-Technical Skills Guidebook, 2020).

“That’s the way we’ve always done it.” This and other similar verbal stop signs have defined ways of working across many hospital systems. Among them is cleaning up water from the floor after showering a patient, to address the fall risk for subsequent foot traffic. The traditional procedure involves awkwardly mopping the floor using one’s feet with several towels, then picking them up from the floor. This study considers the post shower clean-up task with safety by design principles and participatory ergonomics applied in its redesign.

The MAC (Manual Handling Assessment Charts) screening tool was used along with subjective feedback for task evaluation. Data was recorded at baseline. Repeat measures were collected following an iterative redesign process employing an adjustable handled squeegee.

At baseline, four of the eight MAC categories were assessed as high risk, three at medium and one at low risk. The total numerical risk score for the task at baseline was 17. The task redesign resulted in a reduced risk profile with all scores assessed as low risk apart from floor surface which was rated high and load weight/frequency at medium. The overall risk score post redesign was 6.

While training provides guidance to workers, they remain subject to performance shaping factors. Using safety by design principles- “choice architecture” (Levav, 2023)- is shown to reduce physical risk and represents an innovative approach that has the potential to offer widespread benefit when applied across the hospital system.

Keywords: Task Analysis, MAC Assessment, Healthcare, Work Design

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Jonathan Levav; Stanford Graduate School of Business marketing professor, 2023



Testing a short course: Human factors and ergonomics in the land transport system

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The HFESNZ Workforce Development Project supported by WorkSafe and HASANZ found that there is a need for industry focussed human factors and ergonomics (HFE) training, in addition to developing tertiary education courses. The healthcare sector has seen the most development and delivery of educational opportunities, but other sectors also have demonstrated training needs and yet no industry specific HFE training exists for them.

Land Transport is an example of such a sector. It is heavily influenced by engineering and planning and yet transport systems need to be safe and user-friendly if they are to be effective. Road transport in particular is heavily influenced by culture, societal beliefs and historical practices, and ways of working. HFE offers huge potential to not only advance system design but also identify barriers to delivery and leverage points for success.

A one-day short course titled *Human Factors and Ergonomics in the Land Transport System* was developed and a pilot was delivered. Hosted by Auckland Transport, 27 participants, mostly transport engineers, attended the course which had the goal of introducing HFE, why it is important for transport professionals, and introducing a range of methods that can be used to make transport systems safer and more user friendly. It builds on earlier theory suggesting that HFE understanding should be embedded in organisations that would benefit from using HFE. The day was highly interactive as well as informative, and included a mix of practical activities, round table discussions, and conventional presentations from a range of presenters, focussing on areas that are most relevant to transport professionals.

An evaluation survey was conducted, and the course scored highly for meeting participant expectations, helping participants to do their job better, and overall satisfaction. The system mapping exercise was particularly well received. There is clear demand for further courses, and on reflection the team felt that tailoring the material to the audience was critical for success.

Keywords: Short Course, Land Transport, Human Factors and Ergonomics



Human factors integration in major transport projects

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With ongoing investment in large-scale transport infrastructure signalled in the budget through to 2027, embedding Human Factors Integration (HFI) into major projects is essential in achieving outcomes to benefit all users of the transport system. This presentation shares practical insights from a major New Zealand rail project alongside comparative lessons from Australian rail initiatives to demonstrate the value of structured HFI in complex delivery environments.

Using case-based examples the presentation explores how early application of human factors, alignment with systems engineering, and a focus on end-user needs contributed to project success, operational readiness, and safer design outcomes. Examples illustrate how collaborative integration across disciplines, committed stakeholders and early end user engagement helped shape final design. This includes advances in control room layout, supporting safe emergency evacuation, and migration of existing systems into a new environment.

Reflecting on experience in various jurisdictions and under differing regulatory frameworks, this presentation considers the opportunity to further strengthen HFI in major transport projects in Aotearoa.

Keywords: Human Factors Integration, Case Studies, Transport



Systems thinking to extend the workplace to the neurodivergent

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Extending the workplace for a neurodivergent population to join and thrive requires conscious and dedicated effort, mainly by those who can influence decisions or are in the role to lead change. But the key question is where does change start? One of the key findings from research and business case studies is the need to change business philosophy and imperatives – to seek employees with diverse strengths for competitive advantage through innovation and creativity as opposed to cost minimisation through uniformity and standardised access. Seeking employees with diverse strengths, all-inclusive of neurodivergent, and creating a workplace where whole spectrum of employees can be productive requires system thinking. System thinking, in particular on extending the workplace to the neurodivergent, requires two things to happen. First, renovating/innovating the system to capture and tap in the neurodivergent talent into the business/organisation. Second, to design work and system of work, including interactions and interrelations at work, that enables and empowers the neurodivergent to tackle with ease the things that they find challenging at work. This presentation explores the strength and abilities of the neurodivergent population and the principles of system thinking to realise their full potential in the workplace.

Keywords: Neurodivergent, Workplace Challenges, System Thinking, Design for People



From stop watches to the CAN Bus – The change in forestry task analysis over time

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The forest environment is uncontrolled and exposed to weather, difficult terrain and large trees and machines moving in close proximity to people. Human Factors studies using task analysis are undertaken with forest workers to improve their safety, enjoyment of the work and ultimately productivity.

Up until the early 2000s most trees were felled and cut up by a forest worker using a chainsaw. A researcher would stand nearby with a stopwatch and record the time taken to perform tasks. The method was laborious and errors increase with the fatigue of the observer. It was also dangerous with researchers at risk of being injured by falling trees, moving machines and flying debris.

Over time forest work has become more mechanised with workers sitting in the cabs of large machines. The pace of work has increased making the stopwatch redundant. The researcher is still outside standing on the forest floor. Over time video methods have been developed to try to record this faster pace of work and the actual control movements of the operator. But analysis of this data was still manual as the movements must be coded from the video file using time study software. Again, fatigue of the observer can introduce errors, and it is a slow and monotonous task coding video.

In the 2020s we now have a new source of Human Factors information. The controller area network (CAN) bus which is the 'nervous system' of a modern machine. We have finally come to the automated collection of machine movements and corresponding control inputs of the operator. Have we reached Human Factors nirvana?

Keywords: Task Analysis, Human Factors, Forestry, Automation



Translation and knowledge from human factors testing: Reflections on a New Zealand company testing in China

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Human factors research techniques are used in the development of medical devices. Language is essential to these techniques, and the choice of words can have a significant impact on outcomes even when everyone involved speaks the same language. Much thought is put into the language used across a research project; e.g. how to ask non-leading questions during tests, how to word warnings for users, and how to communicate outcomes to stakeholders. Recently, Fisher & Paykel Healthcare conducted simulated-use research in China. Hence, the research organisation and the participants primarily work in different languages. The purpose of this presentation is to reflect on this experience, and on the epistemological implications of translating.

For context, once a medical device design is 'finished', manufacturers need to confirm if the user interface is safe to use prior to it being sold for use on actual patients. Typically, a qualitative assessment via simulated-use testing is undertaken to answer this question. As a New Zealand company, we usually do this testing in English; either in New Zealand, or in North America. This year, the need arose to conduct testing in China.

This presented new challenges. Translation was required, and it was required sequentially across the simulated work systems, processes, and outcomes. For a single test, information passes back and forth between the language of the researcher, and the language of the use being researched.

Perhaps a greater challenge than the translation itself, is reflecting on what we know from the research and the uncertainty that could be introduced. Looking back on this research experience, we can hypothesise that, whilst language is important and translation increases uncertainty, the same sources of uncertainty already exist in a monolingual study.

Keywords: Medical Device, Simulated Use Testing, Translation, Epistemology



Using Instagram to promote ergonomics to tradespeople: A case study from the *Work Should Not Hurt* programme

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Tradespeople experience high rates of musculoskeletal disorders (MSDs), yet traditional communication methods often struggle to reach this group. Social media platforms like Instagram offer a more direct, visual, and relatable way to promote ergonomic principles in the construction industry.

This case study explores the use of Instagram as a tool to deliver ergonomic messaging to New Zealand's construction workforce. As part of the *Work Should Not Hurt* participatory ergonomics programme, an Instagram account (@workshouldnothurt) was created to share practical advice, industry injury data, programme updates, and short instructional videos. Two local ergonomists, featured as the "Ergo Brothers," presented content in a light-hearted and accessible format. The campaign aligned with ACC's broader *Have a Hmmm* initiative and included collaboration with construction influencers to boost reach and credibility.

Since its launch, the page has attracted nearly 900 followers, with a majority indicating backgrounds in trades. Posts featuring relatable, hands-on advice and content from real workers consistently achieved the highest engagement. The platform has also served as a two-way communication channel, with followers messaging for more information, requesting resources, or sharing their own ergonomic adaptations.

Preliminary findings suggest that Instagram can be a valuable tool for engaging tradespeople in ergonomic awareness and injury prevention. This approach may be especially useful for disseminating information to younger workers and for complementing more formal training efforts. Further evaluation is planned to assess behavioural impact and explore the platform's application across other high-risk industries.

Keywords: Work-Related Musculoskeletal Disorders, Construction, Social Media, Participatory Ergonomics



Working from home (WFH): An ergonomic view

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Work has continued to evolve alongside shifts in economics, culture, technology, and society. In recent years, the rise of remote work particularly in response to the COVID-19 pandemic has reshaped how people live and work, turning homes into hybrid environments.

This study explores home workspaces in New Zealand in the post-pandemic context, with a particular focus on how individuals have adapted ergonomically. While working from home has become more common there is still limited research examining the ergonomics of home-based work setups. This study addresses that gap through an exploratory ethnographic approach, drawing on 30 semi-structured video interviews supported by photographic data.

Findings show that many participants made efforts to create functional work environments; however, the quality of ergonomic support varied considerably. Although 75% reported using office chairs, only a small number had chairs with essential features. Others relied on non-office seating, such as dining chairs or stools and often made adjustments with cushions or other informal modifications.

Desk setups followed a similar pattern. While most participants used standalone tables, 86% were using fixed-height designs, and only 14% had access to height-adjustable options. Barriers such as cost and space made upgrades challenging. Medium-sized tables (500mm – 1500mm L) were most common, likely due to their suitability for home layouts, though some arrangements were constrained by cost or size of the space.

Physical discomfort was frequently noted, including back pain, wrist strain and shoulder tension which may be linked to factors such as poor seating, limited mobility, or improper screen positioning. Many tried to improve comfort by rearranging furniture, taking movement breaks, or adding ergonomic accessories such as cushions.

This study highlights the limited ergonomic guidance available to home-based workers. It calls for greater awareness, employer support, and affordable solutions and highlights the need for long-term research into the lasting health impacts of working in non-ergonomic home environments.

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