THE HUMAN FACTORS OF WORK AT HEIGHT (EDITED FROM THE IOSH MAGAZINE)

This is the idea at the heart of 'human factors': individual, organisational and environmental characteristics that mould work behaviour in a way that can affect safety and health. It is especially relevant to working at height, where errors can have fatal consequences.

Of the 123 workplace fatalities in Britain in 2021-22, the most common cause was a fall from height: 29 deaths. And of the 61,713 non-fatal injuries reported by employers, 8% were falls from height – the equivalent of just short of 5000 incidents (GB Health and Safety Executive, 2022a; 2022b).

The risks that human factors can create when working at height include fatigue, distraction, rushing and complacency. Other factors can also have an effect, such as lack of appropriate PPE, poor training in PPE use, poor supervision, poor safety culture and peer pressure. These failings can be organisational, personal or job factors.

Accidents can have profound consequences when working at height: falling from height can cause lasting injury or even death, and falling objects such as tools and building materials pose a threat to anybody below. As the Work at Height Regulations 2005 (WAHR) state: 'You are working at height if you: work above ground/floor level.' Even working at height of one metre (3.3ft) poses a risk.

'There is no doubt that human factors contribute to falls from height. The problem is people often don't recognise the risk.'

Normalisation of risk can create the potential for complacency, and other issues may follow, such as omissions – people start forgetting to do things, to use safety equipment, to recall safety messages. 'The attitude is that accidents are something that happen to other people,' says Peter. 'But every time they fail to take the proper precautions, their odds are diminishing.'

For Galina Hobson CMIOSH, SHEQ manager at specialist difficult-access contractor, CAN (part of RSK Group), skills, training and experience are paramount, but the issue is broader. 'Looking at the root causes of incidents, the human factor is always there,' she says. 'Even with malfunctioning equipment, it happens probably because someone was distracted during the inspection, or there was no routine or robust preventative maintenance programme. But you can't really change human nature, so I find a lot of sense in the idea that the work should be planned in a way that human error is designed out or the consequences are minimised.'

Richard Marshall CMIOSH, senior human factors consultant at human factor management experts Human Reliability Associates, looks at the issue on the basis of what influences performance, behaviour and

general decision-making. ‘What affects such things on site? This includes the individuals, organisational arrangements, task requirements and the ambient environment. All these factors can have a negative and a positive impact on a human’s performance.’

Often, supervisors and managers have misunderstood their responsibilities or the requirements for working at height from mobile access platforms. The person setting the task needs to be fully focused, as [do those] in the platform and on the ground.’

Human factors must be a major ingredient when looking at health and safety, he says. ‘You can never predict what’s going on in somebody’s head, how they are engaged in the project. Involving the individual in the planning stage is critical too. Rescue plans, risk assessments and so on are no good if they’re not communicated to the actual person doing the job. That person also needs to be involved in key decisions about the task and any contingencies. Get that buy-in.’

One of the biggest risks of working at height is dropped objects. Control measures should be in place, but accidents can still happen. ‘Beyond situational awareness and making sure that people are properly skilled and experienced,’ says Galina, ‘one way to address human factors in work at height is to set up the safe system of work in such a way that the consequences of a mistake are close to zero. For dropped objects, apart from using trained and competent personnel and tethering all tools and equipment used at height, a secondary system of protection might be exclusion zones below or catch net systems to catch anything. Another might be to preassemble the system on the ground and minimise the loose objects that can fall.’

Technology is also coming to the fore. IPAF has launched its ePAL app, giving operators a single, secure digital source for storing qualifications and licences. It also provides tips on safety and best practice. ‘It’s a bit like a personal CV of your experience,’ says Brian. ‘We want it to become a sort of passport, where people can prove their competence and experience before being allowed to use powered access machinery.’

PASMA has just completed a successful trial of its TowerSure app. ‘It ensures that when you build a tower, you take a step back and complete a simple checklist,’ says Peter. ‘Are the castors locked, the legs adjusted, the stabilisers in position and so on? Because a photo of the completed tower and checklist is uploaded to an online portal, it’s also an effective way of showing competency and demonstrating experience. [It also enables] the employer to manage and check that risk.’

Not everybody agrees technology is the answer, but the ubiquity of digital devices does present opportunities for condensing credentials and other information.

WORKING AT HEIGHT: GETTING A GRIP ON HUMAN FACTORS

Understand the job

The job must fit the physical and mental abilities of the worker, from time allocated to equipment design. Do all elements of the job encourage people to do the right thing?

Train the individual

Most workers would agree that falls are bad but may not understand the role of human factors. Targeted training or assessments can help adjust their perception.

Educate the supervisors - As the link between organisation and worker, they can remind workers of safe practice and potential hazards and help them to adjust to changing conditions.
Examine the system - Human factors are fundamental to all organisational structures and cultures. Regularly review all processes to ensure they neither promote nor normalise risk. Does planning do enough to address human factors? For example:

- Have ergonomic matters – access, lighting and so on – been considered when designing work areas?
- Is the PPE, such as harnesses, fit for purpose?
- Are welfare facilities available?
- Are workers involved in the decisions and procedure design that affect their safety?

CULTURE AND BEHAVIOUR

'Culture has a big part to play,' says Richard. 'This includes elements such as the time available and the pressures forced on people, such as production versus safety. What are the demands of the job? How long will it take? How many people are needed to do it safely?'

Behaviour and culture should be led from the top, says Brian. 'If the supervisor's not wearing PPE or using a harness, how can you expect anybody else to do it? It's their job to ensure other people are not being complacent and overconfident.'

For Galina, a good safety culture lets people feel comfortable raising an issue. 'They must be able to stop and ask the question. They shouldn't be scared.'

Another key tool is the regulatory framework. 'It's a good way to influence boardrooms and management,' says Richard. 'It gives you that moral, economic and legal reasoning. Utilise the toolkits that come from statutory instruments and similar. Is there enough legislation? I'd rather have more than less, as long as it's supported with guidance, tools and methodologies to comply with.'