

Risk it? ... or play it safe?

Occupational psychologists, **Dr Stephen Fletcher** and **Laura Hedley**, from the **Occupational Psychology Centre (OPC)** share insights about risk anticipation gathered from hundreds of Post Incident Assessments (PIA) and how recognising, anticipating and responding to risks better could help improve safety performance



The OPC has been working in the rail industry since 1992, and its psychologists have a special interest in why rail employees make errors and have safety incidents. Having undertaken hundreds of Post-Incident Assessments (PIA), interviews and development plans for rail employees including: train drivers; conductors; controllers; signallers and track workers, risk anticipation is a common Non-Technical Skill (NTS) shortfall.

Risk can be defined as the exposure to a chance of injury, harm, loss or the possibility of something bad happening. In relation to safety-critical roles, the OPC have categorised risk into three areas:

- Firstly, personal risks. i.e. risks in the context of our health and well-being, such as suffering from lack of sleep, or emotional pressure due to difficulties in a relationship or a recent bereavement. Our mental health may be included in this too, for example, if we are suffering with depression, anxiety or stress.
- Secondly, work risks might include tiredness towards the end of a shift or things out of our normal routine, like a different traction, stopping pattern or route for our shift.
- Finally, environmental risks. It's easy to point to the weather – heavy rain, fog or snow as all risk factors, but equally the time of day maybe a factor e.g., nighttime.

All these different types of risks could leave us vulnerable to making a mistake – impacting on our safety performance and possibly leading to an incident.

The importance of risk: OPC learnings from post incident assessments over the last 20 years

Anticipating and managing risk is a safety issue. If we anticipate risks and manage them so they are controlled and/or diminished then it can help keep ourselves and others safe. Dr Fletcher said: 'Our Post Incident Assessment work has suggested that some rail employees have found it difficult to anticipate and manage their risks, leading them to have one or more safety incidents. It's our opinion that some of the best rail employees are more effective at anticipating and managing risks. They often feel uncomfortable taking risks; and, they are more likely to work at a steady pace, without responding to time pressures.'

So, what are some of the insights from the PIA's that contribute to a good personal risk strategy?

Planning for risks is key to safe performance

A safety-critical worker who 'plans' for risks that may affect their performance that day, is less likely to have a safety incident. They are more aware of risks and can take steps to effectively manage them. This may mean 'thinking ahead' and mentally plotting where possible risks may occur during a shift or route. The safer employee is more likely to start their shift with a clear idea of where the risks might be and also how to reduce or avoid them.

'I'm feeling tired today, so I need to use concentration techniques to stay focused.'

'It's raining heavily tonight, so there may be slip hazards at my station. I need to remind passengers to be cautious and not rush.'

'I had words with my daughter, earlier and I'm feeling distracted. I need to 'park it' for my shift to stay safe.'

OPC psychologists encourage those rail employees engaged in a post incident development programme to prepare their day with a risk assessment, anticipating their risks and helping to manage them with an action plan.

Laura Hedley, Senior Occupational Psychologist at the OPC said: 'Some of the best safety-critical employees might do this risk assessment and action plan as a diary, others may make notes or just do it in their head. Written down with some focused attention is better, but the really important point is that they do it. We advise them that just as a driver prepares a train for departure, so they should prepare themselves too.'

Recognising things change – undertaking dynamic risk assessments

Up front planning for risks is important and can help guide us as to what to focus on. However, sometimes the day just doesn't turn out as expected! That's life!

'There are unexpected delays on the track. I need to stop worrying about my own journey home.'

'The weather's changed to thick fog and visibility is poor. I need to reduce speed and not worry about running late.'

'This maintenance job is taking longer than expected and I feel pressured to get it done and trains running again. I need to make sure that safety comes first and not rush the job.'

The safer railway employees will undertake a dynamic risk assessment during their shift, recognising if something has changed, and understanding that the risks need to be re-evaluated. They will ask themselves 'Do I need to re-think my risk plan? Are there new risks I wasn't anticipating? Have the risks increased, stayed the same or decreased and therefore what action should I take to manage them?'

When the OPC reviewed incidents involving a track company they found that often safety incidents occurred when a situation had changed. For example, the

location of the work had changed, or additional tasks being added to the job, or the time by which trains had to run again was sooner. For this track company its track workers had not done a re-evaluation of their risks.

Laura Hedley went on to say: 'Situations can change but often the employee doesn't recognise the change in risk, leaving them vulnerable. Then they have an incident. Our rail employees need to be ever vigilant to change. Acknowledging risk changes and making important updates to their personal risk plan helps keep them and others safe. We can't afford to carry on, regardless.'

The subtle and accumulating risks can be the most dangerous

In-your-face risks such as a person falling on the track, a fire alarm going off, or an approaching hurricane are easily identifiable and obvious to spot. Another key learning OPC psychologists gleaned from personnel involved in safety incidents is that it is often the small, subtle, less obvious but equally important risks that we can sometimes miss. An accumulation of these can collectively leave us very exposed with the possibility of a more major safety incident occurring. Because each risk is subtle and emerges over time, then an employee may fail to detect them leading to an incident. We sometimes call these a 'Risk Journey'

Taking a recently appointed train driver, a hypothetical risk journey build up could look like this:

that they perceive the risk as nowhere near happening, when in actual fact it was already upon them and a safety incident was almost inevitable. As small risks accumulate, the probability is that an employee is much more likely to have a safety incident.'

Different people with different risk profiles: who takes and who doesn't take risks

Not acknowledging and anticipating risks is a 'risky thing!' Sometimes an employee may not have the experience to recognise a risk, or they may forget to think ahead. At the opposite end of the spectrum, there may be veteran employees whose experience makes them complacent or routine-bound. They may not recognise risks as they emerge. An employee whose approach to risk is denial, or they see acknowledging risks as a weakness may not be ideal for a safety-critical role. Those who find taking risks exhilarating, may also choose to take more risks, more often.

Some employees are very risk averse. They can be effective at recognising risk and putting mechanisms in place to manage them safely. They don't feel the need to take a risk for the excitement or the thrill of it. They are more likely to believe that the safest option is always the best option. Great safety-critical employees feel uncomfortable taking risks and feel that no risk is worth taking, whatever the situation. So, our tendency to take risks

shift, as well as dynamic risk assessments during a shift are essential.

- A post-shift risk review of any near misses, or things to do differently next time, is also positive.

Encourage immediate corrective action of 'risky' behaviour:

- When a safety-critical employee displays risky behaviours, however small, the OPC would recommend incorporating these into an immediate action plan. Even small, apparently inconsequential things could lead to more serious incidents.

Post incident re-training of employees who may have had 'minor' safety incidents:

- The OPC runs development programmes focusing on the NTS of risk awareness and management. These are suitable for managers, team leaders and frontline employees. They help individuals anticipate risks better, manage them and can help improve their safety performance, as well as the safety performance of those who work for them.

Encourage reporting risks when encountered or observed:

- Encourage a reporting culture around risk. Either self-reporting or 'whistle-blowing' in order to mitigate risks. Reporting risky behaviour can be important for the employee at risk, as well as other employees, passengers and the organisation.

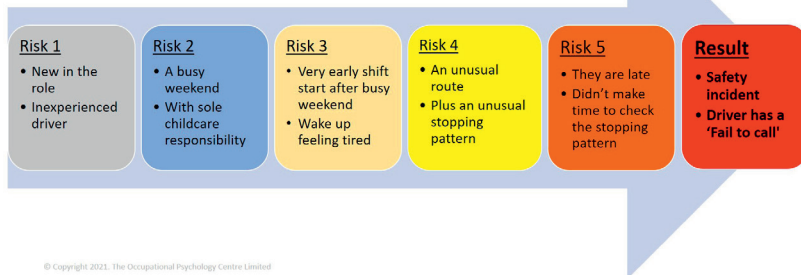
Incorporating the NTS of Risk Anticipation into recruitment processes:

- The OPC would recommend using a psychometric tool that assesses for risk anticipation as part of a talent acquisition process for safety-critical roles. OPC Assessment's [Risk Anticipation and Time Focus Questionnaire \(RTQ\)](#) is a personality questionnaire that profiles a person's preferred style and behaviours around risk anticipation and management. It can also be used as part of a PIA when supporting individuals who may have had a safety incident.

Dr Fletcher summarised by saying:

'The NTS of risk anticipation and the management of risks are really important skills to recognise in contributing to strong safety performance. Having a risk averse employee who proactively thinks about risks up front – who anticipates them, plans for them and dynamically responds to them is much more likely to avoid an incident. It's important that we recognise even the smallest risks and their potential to accumulate. It is to our peril that we habituate risks or that we are dismissive of their potential impact on safety. Planning for risks is planning for safety!'

Illustration of a Risk Journey



In a PIA the OPC will ask the employee, 'Did you feel at risk immediately prior to the incident?' they will most often respond 'no'. They didn't spot the numerous small, subtle risks and anticipate their combined potential to lead to a safety incident. In this example, if the driver had recognised each of the individual risks, they could have intervened at a number of points earlier across the risk journey, put some actions in place, and possibly avoided the 'Fail to call'.

Dr Stephen Fletcher said: 'Individuals' perceptions about risk can be very interesting. When we meet with an employee after an incident, we often find

could be an individual difference based on our experience and/or personality.

Some OPC recommendations for anticipating and managing risk

As the saying goes 'To be forewarned is to be forearmed'.

If we are to help improve safety performance and reduce the number of railway incidents still further then there are some actions we can consider:

Encourage good personal risk management habits for all employees:

- Proactive risk assessments prior to a