Editorial

Importance of hazard identification in risk management

Risk Management, in the context of occupational safety and health (OSH), is the process of identifying OSH hazards, determining the risk based on likelihood and severity of work injuries, ill health and property damage, prioritising the implementation of preventive measures to mitigate these risks and communicating the risk assessment to workers. In some jurisdictions, the conduct of Risk Management is a statutory requirement, such as in Singapore[1)] and United Kingdom (UK)[2)].

Ideally, physical, chemical, biological, ergonomic and psychosocial hazards are identified when conducting OSH Risk Management. With the intent to reduce human error and influence positive safety behaviour, UK's Health and Safety Executive[3)] broadened the traditional views of human factors/ergonomics by including organisational systems, calling it Human Factors and defining it as "environmental, organisational and job factors, and human and individual characteristics, which influence behaviour at work in a way which can affect health and safety". This translates into assessing OSH risks contributed by job factors (such as ensuring a good match between job and worker); individual factors (such as competence, attitude, and risk perception); and organisational factors (such as work schedule, quality of communications, safety culture, and leadership) and identifying measures to manage them. Recognising the increased risk of injuries posed by personal factors[4, 5)], Singapore's enhanced Risk Management 2.0 framework[6)] requires the additional assessment of Human Factors and individual health risk factors and susceptibilities.

As identification of hazards is the first step in Risk Management, it implies that hazards which are not identified would not go through the rigour of the Risk Management process, leading to the non-identification of preventive measures for implementation and communication to prevent harm in the workplace. OSHA (Occupational Safety and Health Authority, USA) therefore considers the non-identification of hazards as one of the "root causes" for workplace injuries, illnesses and incidents and that a proactive, ongoing process to identify and assess such hazards is a critical element of any effective safety and health program[7)].

Hence, the risk of non-identification of hazards needs to be managed in a similar way to how other business or quality risks are managed in an organisation. We need to be aware of the potential challenges faced by the team conducting the Risk Management and of the Human Factors at play. While information from websites such as that from the Health and Safety Executive[8)] provides tips to identify hazards that matter, whether all significant hazards are identified or not would depend on the knowledge, attitude and experience of the individuals conducting the Risk Management and organisational factors like who the team is reporting to and whether adequate resources are provided. For example, to check the safety data sheets of chemical hazards, it requires effort and competency. Some hazards may be missed, especially if it is commonplace, such as cement and solar radiation[9)] in a construction site or combustible dust[10)] which can be found in a wide range of industries and processes. Some hazards require experience to spot e.g. looking for tiny mercury droplets on laboratory benchtops. For some hazards, to identify them, it would require regular inspections and conversations with workers and supervisors. Hence, to minimise the risk of non-identification of hazards, processes, checklists, training and a peer-checking system could be put in place. It requires team members to appreciate the intent of Risk Management, have a strong sense of responsibility and ownership, be able to work in partnership with each other, and management to demonstrate strong leadership and support.

As safety and health professionals, we need to work closely with management and to keep abreast of newly introduced work processes and changes in work arrangements as these may introduce new hazards and require a review of existing risk assessments. When conducting OSH risk assessments, we should proactively and systematically identify all relevant hazards. By doing hazard identification well, we will be one step nearer to our goal of achieving zero harm.

Disclaimer

The opinions and assertions contained within this article are those of the author and should not be construed as representing those of the Ministry of Manpower, Singapore.

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