Australian Government

Comcare

Latest Workplace Trends

Research Alert

June 2023

This research alert highlights areas of recent interest in the area of Work Health and Safety (WHS) and workers' compensation. The summarised issues have emerged from a six-month review of grey literature, including national WHS conference topics, and peer-reviewed publications from Occupational Health and Safety (OHS) industry journals. Five themes were identified from this six-month review and whilst this list of is not exhaustive, it provides a snapshot of areas of current research/profession interest.

The five identified emerging themes are:

1. Environment, Social and Governance (ESG) and OHS/WHS
Environmental, social and governance (ESG) information are increasingly being used by investors to inform financial decisions. This information refers to factors that are perceived to have positive impacts to the environment, society, and the world at large. OHS/WHS initiatives as part of a total quality management approach send a strong message that the organization cares for its workers, improving its ESG profile.

2. Generational differences between workers and its effect on WHS
For the first time since before the industrial revolution, workplaces can be staffed by workers across five generations: the Traditionalist Generation (born before 1945), Baby Boomers (born 1946–1964), Gen X (born 1965–1981), Millennials (born 1982–2000) and Gen Z (born after 2001). With such age diversity at work, understanding the specific characteristics of each generation, including communication preferences and preferred workstyles, may help ensure maximum impact of WHS systems whilst also avoiding potential sources of generational conflict.

3. Learning at work
There has been an increasing awareness of the importance of workplaces as a learning environment, an important part of any WHS system. Learning in the work environment has been described using various labels, with the two main approaches used interchangeably in the literature being work-based learning (WBL) and work-integrated learning (WIL). An important component of both of these is the use of a mentor in the workplace. Workplace mentoring following WHS training has been identified as an important measure to ensure compliance with WHS standards.

4. Safety culture
Safety culture has been widely reported as important for the successful implementation of WHS systems. Despite this there remains a lack of agreement on what constitutes safety culture, with definitions ranging from an all-encompassing construct, including behaviours, attitudes, perceptions, beliefs, and knowledge, to more specific constructs such as patient safety culture. A common feature across all models of safety culture is the understanding that safety depends on how people feel, what they do and resources in the organization.

5. WHS risk factors for vulnerable workers
Work health and safety professionals are ideally placed to promote the importance of equity in organizations to ensure the protection of vulnerable workers, as they develop strategies and policies

to deal with an ever-changing workplace of the future. WHS professionals have a key organizational role and a moral responsibility to encourage policies that improve social justice and reduce inequalities. Whilst vulnerable sections of the population are often considered in public health measures, they are not always considered in WHS initiatives and integrated in the workplace.

1. Environment, Social and Governance (ESG) and OHS/WHS

A significant recent development in the financial markets has been the incorporation of environmental, social and governance (ESG) information by investors and financial analysts in trading decisions (Boulhaga et al., 2022). It is estimated that about US$30 trillion is financed by investment plans that employ ESG ratings in financing analyses and portfolio choices (GSIA, 2018).

The concept of ESG as a mechanism for gauging organisational performance by investors first appeared in a United Nations Global Compact (2004) report, which called for development of "*…guidelines and recommendations on how to better integrate environmental, social, and corporate governance issues in asset management, securities brokerage services, and associated research functions"*. ESG refers to factors that are perceived to have positive impacts to the environment, society, and the world at large and have been increasingly measured and cited in companies' annual reports (Sarajoti et al., 2022).

In 2015, all United Nations Member States adopted the 2030 Agenda for Sustainable Development, which provides a shared blueprint for peace and prosperity for people and the planet, based around 17 Sustainable Development Goals (SDGs). These goals aim not only to eradicate poverty and reduce climate change, but also to integrate and balance the three dimensions of sustainable development—economic, social and environmental—in a comprehensive global vision (UN 2015; Mooneeapen et al., 2022).

The pressure from investors for organisations to apply elevated standards of corporate governance has seen an increasing number of companies integrating Occupational Health and Safety (OHS) within business management. The integration of OHS into quality management strategies such as Total Quality Management (TQM) aims to improve the image and reputation of the company, through improving labour conditions, labour safety, meeting the companies' commitments of corporate social responsibility, and ultimately maintaining and improving investors' confidence (Paun et al., 2019).

A recent meta-systematic review on the relationship between ESG and total quality management (TQM) (Lim et al., 2022) concluded that these mechanisms, when adopted, should be integrated rather than separated. Integrating ESG and TQM holds great potential given that, whilst ESG offers a set of aspirations, TQM provides the structured framework and process (i.e., quality management) to translate these aspirations into a form that is measurable and thus objectively communicable and monitorable. For example, there has been increasing awareness of the role of work stress on wellbeing, with work related stress linked to seven of the ten leading causes of death in high-income nations: heart disease, cancer, stroke, injuries, suicide/homicide, chronic liver disease, and respiratory disorders (emphysema, chronic bronchitis) (Burke, 2019). *ISO 45003 – Psychological health and safety at work: Guidelines for managing psychosocial risks* is the first international standard in this area, which aligns with seven of the United Nations' SDGs. This standard encourages companies to manage psychosocial risks through an OHS approach and sends a strong message to stakeholders that an organisation truly cares for the safety and wellbeing of its people. Accordingly, to improve their ESG profiles organisations are increasingly adding psychosocial issues to their risk registers as part of their TQM systems. This extends from direct interventions for their staff but also includes

the relationship a business has with its contractors, subcontractors, suppliers, and other interested parties along the supply chain in which the organisation operates.

References

1. Boulhaga, M., Bouri, A., Elamer, A. A., & Ibrahim, B. A. (2023). Environmental, social and governance ratings and firm performance: The moderating role of internal control quality. Corporate Social Responsibility and Environmental Management, 30(1), 134-145.
2. Global Sustainable Investment Alliance (GSIA). (2018). Global sustainable investment review. https://www.gsi-alliance.org/wp-content/uploads/2019/06/GSIR_Review2018F.pdf
3. Sarajoti, P., Chatjuthamard, P., Papangkorn, S., & Phiromswad, P. (2022). The Environmental, Social, and Governance (ESG) Investment and Its Implications. In Corporate Social Responsibility. IntechOpen.
4. UN (2015) Transforming our world: the 2030 Agenda for Sustainable Development https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf
5. Mooneeapen, O., Abhayawansa, S., & Mamode Khan, N. (2022). The influence of the country governance environment on corporate environmental, social and governance (ESG) performance. Sustainability Accounting, Management and Policy Journal, 13(4), 953-985.
6. Paun, A., Moraru, R., & Isac, C. (2019). Systemic Integration of Occupational Health and Safety within Business Management. Annals of the University Dunarea de Jos of Galati: Fascicle: I, Economics & Applied Informatics, 25(1).
7. Lim, W. M., Ciasullo, M. V., Douglas, A., & Kumar, S. (2022). Environmental social governance (ESG) and total quality management (TQM): a multi-study meta-systematic review. *Total Quality Management & Business Excellence*, 1-23.
8. Burke, R. J. (2019). Creating psychologically healthy workplaces. In Creating psychologically healthy workplaces (pp. 2-41). Edward Elgar Publishing.

2. Generational differences between workers and its effect on WHS

Internationally there is a trend towards an increasingly aging workforce. In Australia, between 2001 and 2021 the workforce participation rate of older Australians more than doubled (from 6.1% in 2001 to 15% in 2021) (ABS, 2021), with labour force participation for older men increasing from 10% to 19%, and for older women from 3.0% to 11% (ABS, 2021). This has led to the unique situation where, for the first time since before the industrial revolution, workplaces could be staffed by workers across five generations (Becker et al., 2022). The generations include the Traditionalist Generation (born before 1945), Baby Boomers (born 1946–1964), Gen X (born 1965–1981), Millennials (born 1982–2000) and Gen Z (born after 2001).

Whilst there remains some debate in the organizational sciences about the concepts of "generations" and "generational differences" (Rudolph & Zacher, 2022) a body of evidence has explored the role of generational diversity across an organisation. Studies have shown that whilst employees value generational diversity, believing it improves organizational performance, tensions are more common in generationally diverse teams. These generational tensions often relate to mechanisms of communication (on-line vs. face-to-face meeting), attitudes to work-life balance (work-centric vs. balanced perspective), career goals (career progression vs. the desire to make a difference), and transfer of knowledge (face to face vs digital asynchronous communication) (Becker et al., 2022). All of these conflicts may affect the successful implementation of work health and safety (WHS) systems. For a successful WHS management system, WHS managers need to be able to communicate with, lead, and train workers across all generations that exist in today's workforce. Being sensitive to potential generational differences across the workforce ensures that the WHS manager maximises the effectiveness of the WHS system.

In a generationally diverse workforce, a broad communication style should be used for disseminating WHS information as different generations appear to have different communication preferences. Baby Boomers react best to in-person conversations, Gen X responds best to direct and immediate communication, whilst Millennials and Gen Z prefer e-mail or voice mail (Kelly et al., 2016). Different generations also have different preferences on the methods of training. Millennials and Gen Z have an affinity with the digital world, having grown up with technology such as broadband, laptops and smartphones. This has led to a greater expectation of instant access to information and an emphasis on learning independently using computer-based training or the internet. At the other end of the spectrum Baby Boomers and Generation X prefer more traditional classroom or paper-based training. Given the generational differences a one-size fits all approach to WHS training formats and materials is unlikely to be the most effective approach.

When developing WHS teams, understanding what each generation wants may facilitate success of a multigenerational team. Generation Z workers tend towards mobile-centricity, being self-motivated, preferring to work alone rather than in teams, valuing personal rewards more than work ethic and organizational commitment; and wanting more individual-focused leadership styles (Dobrowolski et al., 2022, Becker et al., 2022). Gen Y workers generally thrive on the opportunity to help others and enjoy being recognized for their unique input (Fishman, 2016). Inviting the Gen Y worker to join a safety committee or putting them in charge of a safety project helps facilitate their involvement. Gen X employees prefer feeling that they belong, and want to be listened to (Fishman, 2016), making them excellent members or leaders of WHS committees. Baby Boomers tend to value a feeling of control (Fishman, 2016), which can be an issue in committees. It is important that leaders respond to this value by asking Baby Boomers what they think or probing them for ideas to keep them involved in the decision-making process.

Whilst it is easy to blame generational conflict as a reason for conflict in a workplace, there are multiple reasons why individuals may react in a certain way, not just due to generational differences (Rudolph et al., 2020). Each generation, however, brings its own communication styles, leadership styles, and work ethics (Moss, 2017). Understanding these differences may help support generational diversity in the workforce, leveraging off the unique strengths of each generation and avoiding potential inter-generational conflict.

References

1. ABS 2021. Labour force, Australia, detailed- external site opens in new window. ABS cat. no. 6291.0.55.001. Canberra: ABS.
2. Rudolph, C. W., & Zacher, H. (2022). Generations, we hardly knew ye: An obituary. Group & Organization Management, 47(5), 928-935.
3. Becker, K. L., Richards, M. B., & Stollings, J. (2022). Better together? Examining benefits and tensions of generational diversity and team performance. Journal of Intergenerational Relationships, 20(4), 442-463.
4. Kelly, C., Elizabeth, F., Bharat, M., & Jitendra, M. (2016). Generation gaps: Changes in the workplace due to differing generational values. Advances in Management, 9(5), 1-1,8.
5. Dobrowolski, Z., Drozdowski, G., & Panait, M. (2022). Understanding the impact of Generation Z on risk management—A preliminary views on values, competencies, and ethics of the Generation Z in public administration. International Journal of Environmental Research and Public Health, 19(7), 3868.
6. Moss, D. (2017). Generations+ 7 values= endless opportunities. Society for Human Resource Management.
7. Fishman, A. A. (2016). How generational differences will impact America's aging workforce: Strategies for dealing with aging Millennials, Generation X, and Baby Boomers. Strategic HR Review.
8. Rudolph, C.W., Rauvola, R. S., Costanza, D. P., & Zacher, H. (2020). Generations and generational differences: Debunking myths in organizational science and practice and paving new paths forward. Journal of Business & Psychology. 36(6), 945–967.

3. Learning at work

An increasing awareness of the importance of the workplace on a worker's life has seen an increasing interest in authentic learning and the potential of the workplace as a learning environment (Pylväs et al., 2022). Learning in the work environment has been described using various labels, with terms such as work-based learning (WBL), work-related learning (WRL), workplace learning (WPL) and work-integrated learning (WIL) used interchangeably in the literature. WBL/WRL/WPL has been widely considered a means to increase the success of vocational education and training (VET) through greater collaboration between vocational education providers and workplaces (Pylväs et al., 2022). It has been argued that collaboration between workplaces and vocational education providers facilitates this acquisition of relevant skills through availing authentic real-life learning situations (Arinaitwe et al., 2022).

There has been debate about the pedagogical compatibility of the different terms, with the two main approaches being WBL and WIL (Gerhardt & Annon, 2023). WBL is considered as learning that occurs in a workplace, through participation in work practice and process, whilst WIL involves learning activities in which the theory of the learning is integrated with the practice of work through specifically designed curricula, pedagogic practices and student engagement. Some authors have proposed that WBL is a subset within WIL (Gerhardt & Annon, 2023), but the two approaches appear to differ in the main focus of the teaching. In WIL the educational provider presents a learning program in which aspects of the learning occur in the workplace while in WBL the learning occurs entirely in the workplace. The two concepts have similarities and differences, but both require the involvement of employers, industry bodies and educational providers.

For most of the workforce WHS learning occurs in the workplace and therefore falls within the scope of WBL. WBL is now recognised as a unique field of study (Garnett, 2016) with growing pedagogical interest (e.g., Fergusson et al., 2019; Scott, 2020). Despite this, WBL has been described as being "everywhere and nowhere", i.e., it is everywhere but is often unrecognised. In an educational context learning in the workplace may be implicit, unintended, opportunistic and unstructured learning, or more structured through the use of a mentor. It may also occur as part of a primary learning activity where learning is the intended outcome of a work-related activity, or secondary learning, where it is an incidental and spontaneous by-product of work.

A unique component of workplace learning is the role of the mentor. A workplace mentor is someone, usually a more senior/experienced employee who provides guidance to a less experienced employee, the mentee. The mentor's role is as a role model, to share their knowledge, skills and expertise, and provide help and advice to the mentee. Mentoring usually occurs over a prolonged period of time whereby the mentor and student interact to achieve the learning objective of the mentoring program. Mentoring can be formal and informal. Formal mentoring is more structured, with a formal process for establishing the connection between mentor and mentee, and informal mentoring is less structured and usually mutually agreed upon (Wanberg et al., 2003). Workplace mentoring following WHS training was identified as an important measure to ensure health care workers complied with WHS standards in a hospital setting during the pandemic (Seif-Eldin et al., 2021).

As well as supporting a worker's learning, mentor functions can include career-related support and psychosocial support (Ivey & Dupre, 2022). Psychosocial support helps strengthen the mentees' identity, promoting feelings of competence, and success at work. These lead to benefits for worker health and safety including a greater sense of wellbeing (e.g., Chun et al.,2012), and reduced levels of role stress and burnout (e.g., Thomas & Lankau, 2009). Attributes of a good workplace mentor include: accessibility for mentees, sensitivity to cultural and gender differences, self-awareness, discretion, patience, tolerance and being non-judgemental, setting positive expectations and understanding (Miller, 2016), the ability to listen and communicate, knowledge of internal and external environment, and empathy and understanding of others (Allen & Poteet 1999). Mentoring is generally identified as a positive measure, but not all mentor-mentee relationships are positive and dysfunctional relationships have significant implications for a workplace. They can reduce a worker's self-esteem and job satisfaction, and increase job withdrawal, turnover intentions, psychological distress, burnout and reductions in learning, and physical health (Eby & Allen, 2002; Eby et al., 2004, 2010; Eby, Durley, et al., 2008; Hurst & Eby, 2012).

References

1. Pylväs, L., Nokelainen, P., & Rintala, H. (2022). Vocational students' perceptions of self-regulated learning in work-based VET. Vocations and Learning, 15(2), 241-259.
2. Arinaitwe, D., Mifsud, L., Kato, H., & Sannerud, A. R. (2022). Learning through collaboration between vocational teacher training institutions and workplaces: Barriers and contradictions. Nordic Journal of Vocational Education and Training Vol. 12, No. 1, 25–50
3. Gerhardt, T., & Annon, P. (2023). Towards conceptual clarity: Pedagogical liminality. International Journal of Work-Integrated Learning, 24(2), 209.
4. Garnett, J. (2016), "Work-based learning: a critical challenge to the subject discipline structures and practices of higher education", Higher Education, Skills and Work-Based Learning, Vol. 6 No. 3, pp. 305-314.
5. Fergusson, L., Shallies, B. and Meijer, G. (2019), "The scientific nature of professional studies: an introduction to first principles", Higher Education, Skills and Work-Based Learning, Vol. 10 No. 1, pp. 171-186.
6. Scott, D. (2020), "Creatively expanding research from work-based learning", Journal of Work-Applied Management, Vol. 12 No. 2, pp. 115-125.
7. Seif-Eldin AS, Elhessewi GMS, Alhashem AM and Almoayad F (2021). Rights, Responsibilities, and Practices of Health Care Workers Regarding Occupational Health and Safety during COVID-19 Pandemic. Egyptian Journal of Occupational Medicine, 45(3), 167-182.
8. Ivey, G. W., & Dupré, K. E. (2022). Workplace mentorship: A critical review. Journal of Career Development, 49(3), 714-729.
9. Chun, J. U., Sosik, J. J., & Yun, N. Y. (2012). A longitudinal study of mentor and protégée outcomes in formal mentoring relationships. Journal of Organizational Behavior, 33, 1071–1094. https://doi.org/10.1002/job.
10. Thomas, C. H., & Lankau, M. J. (2009). Preventing burnout: The effects of LMX and mentoring on socialization, role stress, and burnout. Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management, 48(3), 417-432.
11. Miller, A. (2016). Mentoring Students and Young People: A Handbook of Effective Practice. Routledge.
12. Allen, T., & Poteet, M. (1999). Developing effective mentoring relationships: Strategies from the mentor's viewpoint. The Career Development Quarterly, 48(1), 59–73.

13. Eby, L. T., & Allen, T. D. (2002). Further investigation of protégé's negative mentoring experiences. Group & Organization Management, 27, 459–479.
14. Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2008). Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. Journal of Vocational Behavior, 72, 254–267.
15. Wang, J., Gill, C., & Lee, K. H. (2023). Effective mentoring in a work-integrated learning (WIL) program. Journal of Teaching in Travel & Tourism, 23(1), 20-38.

4. Safety culture

Safety in the workplace is a fundamental challenge that organizations must deal with, from both a regulatory and a moral/ethical perspective. To successfully meet this challenge an organisation must develop internal processes, founded on coordination and cooperation within the organisation as well as adapting to external influences, such as the environment in which the organisation works (Casey et al., 2022). The way in which this challenge is acknowledged and addressed is affected by the organisational culture of the company. Organizational culture has been described as the implicit core assumptions that manifest in espoused values (priorities and perceptions) and artefacts (symbols, signs, behaviours) of a workplace (Schein, 2010).

The term 'safety culture' was first used in the 1987 Organisation for Economic Cooperation and Development (OECD) Nuclear Agency report in the context of the Chernobyl nuclear disaster (INSAG, 1988). Safety culture is seen as a sub-component of organisational culture, and focuses on the individual, the job, and organisational features that affect and influence health and safety in an organisation (Cooper 2000). As with all the different aspects that make up organisational culture, it is not immune to the broader internal and external influences that affect organisational culture as a whole.

Safety culture tends to be defined either as an all-encompassing construct, including behaviours, attitudes, perceptions, beliefs, and knowledge, or in more specific terms such as patient safety culture (Fleming, 2005), process safety culture (Olive, O'Connor & Mannan, 2006), resilient safety culture (Adjekum & Tous, 2020), and 'emotional' safety culture (Wang, Wu & Huang, 2018). The lack of a standard definition for the construct of safety culture makes it difficult to discern the relationship between safety culture and measurable outcomes (i.e., safety accidents and injuries). It also makes it very difficult to identify, measure and monitor safety culture. This lack of agreement on its definition means that authors have promoted safety culture as either having dramatic effects in increasing safety performance (Hudson, 2007), or as being a concept that should be rejected (Hopkins, 2019).

Despite the absence of a standardized definition, a range of models or theories have been developed to help understand safety culture, including Social Learning Theory (Bandura, 1977), Schein's Theory (Schein, 1992), Total Safety Culture or Geller's Theory (Geller, 1994), Reason Safety Culture Model (Reason, 1997), Guldenmund's Three Layered Organisational Culture (Guldenmund, 2000), Reciprocal Safety Culture Model (Cooper, 2000), Reiners Model/P2T Model (Reiners, 2011) and The Egg Aggregated Model (Vierendeels et al., 2018). Each model approaches the construct of safety culture from a different focus, but all share a common feature that safety depends on how people feel (psychological), what they do (behavioural), and the resources in the organization (situational). To promote a good safety culture, all three aspects need to be considered. For example, in the mining industry it is acknowledged that to develop a safety culture in an organization, safety knowledge must be strengthened first, such as knowledge on production and production equipment, safety awareness, knowledge on skills and competencies, and training on self-protection (Miao et al., 2020; Zhang et al., 2020; Jiang et al., 2020; Wang and Wu, 2019). However, to foster safety culture, it is important for the organisation to provide a safer working environment to workers (Jiang et al., 2020; Rubin et al., 2020).

Safety culture is a complex concept, that remains widely studied but poorly understood. Despite this lack of clarity taking a broader cultural view on safety within an organisation, understanding

how workers feel, what they do and ensuring the organization is providing appropriate resources is vital.

References

1. Casey, T. W., Hu, X., Reid, C., Tran, P. A., & Guldenmund, F. W. (2022). Rolling up our sleeves and pulling up our socks: A critical review of safety culture definitions and measures, and innovative ways to move the field forward. Handbook of Research Methods for Organisational Culture, 291-311.
2. Schein, E. H. (2010). Organizational culture and leadership (Vol. 2). John Wiley & Sons.
3. International Nuclear Safety Advisory Group (INSAG). (1988) “Basic safety principles for nuclear power plant.” Safety Series No 75- INSAG-3, Rep., International Atomic Energy Agency, Vienna
4. Cooper, M. D. (2000). Towards a model of safety culture. Safety science, 36(2), 111-136.
5. Fleming, M. (2005). Patient safety culture measurement and improvement: a “how to” guide. Healthc Q, 8(Special Issue), 14-19.
6. Olive, C., O’Connor, T. M., & Mannan, M. S. (2006). Relationship of safety culture and process safety. Journal of hazardous materials, 130(1-2), 133-140.
7. Adjekum, D. K., & Tous, M. F. (2020). Assessing the relationship between organizational management factors and a resilient safety culture in a collegiate aviation program with Safety Management Systems (SMS). Safety science, 131, 104909.
8. Wang, B., Wu, C., & Huang, L. (2018). Emotional safety culture: A new and key element of safety culture. Process Safety Progress, 37(2), 134-139.
9. Hudson, P. (2007). Implementing a safety culture in a major multi-national. Safety science, 45(6), 697-722.
10. Hopkins, A. (2019). Organising for Safety. Wolters Kluwer.
11. Bandura, A., 1977. Social Learning Theory. Prentice-Hall.
12. Schein, E., 1992. Organizational Culture and Leadership, second ed. Jossey-Bass, San Francisco.
13. Geller, E.S., 1994. Ten principles for achieving a total safety culture. Prof. Saf. 39 (9), 18–24.
14. Reason, J., 1997. Managing the Risks of Organizational Accidents. Ashgate, Aldershot.
15. Guldenmund, F., 2000. The nature of safety culture: a review of theory and research. Saf. Sci. 34 (1–3), 215–257
16. Reniers, R.L.E.P., Corcoran, R., Drake, R., Shryane, N.M., V¨ollm, B.A., 2011. The QCAE: a questionnaire of cognitive and affective empathy. J. Pers. Assess. 93 (1), 84–95.
17. Vierendeels, G., Reniers, G., van Nunen, K., Ponnet, K., 2018. An integrative conceptual framework for safety culture: the Egg Aggregated Model (TEAM) of safety culture. Saf. Sci. 103 (September 2017), 323–339.
18. Miao, C., lin Duan, M., meng, Sun, xiu, X., Wu, X. yu, 2020. Safety management efficiency of China’s coal enterprises and its influencing factors—based on the DEATobit two-stage model. Process Saf. Environ. Protect. 140, 79–85
19. Zhang, J., Fu, J., Hao, H., Fu, G., Nie, F., Zhang, W., 2020. Root causes of coal mine accidents: characteristics of safety culture deficiencies based on accident statistics. Process Saf. Environ. Protect. 136, 78–91
20. Jiang, W., Fu, G., Liang, C. yang, Han, W., 2020. Study on quantitative measurement result of safety culture. Saf. Sci. 128 (11), 104751
21. Wang, B., Wu, C., 2019. Safety culture development, research, and implementation in China: an overview. Prog. Nucl. Energy 110 (September 2018), 289–300.

22. Rubin, M., Giacomini, A., Allen, R., Turner, R., Kelly, B., 2020. Identifying safety culture and safety climate variables that predict reported risk-taking among Australian coal miners: an exploratory longitudinal study. Saf. Sci. 123 (November 2019), 104564

5. WHS risk factors for vulnerable workers

From a work health and safety (WHS) perspective it is important that the impact of working conditions on vulnerable workers is considered. Workers considered to be vulnerable include new workers, foreign migrant workers, workers from culturally or linguistically diverse (CALD) backgrounds, women, ageing workers, workers in high-risk occupations, those in underserved communities, and those with lower language proficiency (Cote et al., 2021). Disadvantaged individuals are more likely to have poorer health status and lower educational levels, including health literacy, and live at or below the poverty line (Tamin et al., 2021).

Vulnerable workers are more likely to be in more precarious forms of employment such as temporary, part-time, on call, subcontractor or gig work. The working conditions associated with these employment types are generally less structured or supported, resulting in less favourable working conditions with greater risks to the workers' health and safety. Poor safety standards, reduced availability of protective gear, and lack of information, education and safety training further threaten the WHS of vulnerable workers. These workers are also at higher risk of abuse and exploitation, with a tendency to disproportionately relegate them to perform hazardous activities in poor working conditions compared to other categories of workers. The lack of bargaining power and legal defence, along with the precarious nature of this type of employment disadvantage these workers further.

The exploitation of vulnerable workers has been identified as a major issue in Australia with migrant communities recognised at risk due to the economic and linguistic vulnerabilities they might face (Select Committee on Human Trafficking in New South Wales, 2017). In addition to facing a higher incidence of WHS risks, vulnerable migrant workers from CALD backgrounds, on work visas, and working in certain sectors, such as horticulture, production work and hospitality, are also at higher risk of underpayment.

WHS issues for vulnerable workers were particularly evident during the Covid-19 pandemic during which vulnerable workers bore a disproportionate burden from the workplace changes that resulted. A global review of OHS professionals found that workers in less secure jobs (precarious employment) (79%), or informal work (69%), were the most at risk of disadvantage during the pandemic (Tamin et al., 2021).

In Australia, casual workers, particularly agency staff, CALD workers, or workers with poor working language skills had limited knowledge of their WHS rights and were therefore less likely to seek better protections or report Covid-19 symptoms, often from fear of suffering financial losses due to reduced shifts or even loss of their jobs. A recent secondary data analysis explored the relationship between occupational characteristics, in terms of typical worker characteristics, and job characteristics related to: (i) the ability to conduct a job from home and (ii) the degree of physical proximity to others (Mongey et al., 2021). High physical proximity or low work-from-home occupations were identified as more likely to result in higher exposure to the Covid-19 virus at work.

The analysis found that workers in low-work-from-home and high-physical-proximity jobs were more economically vulnerable across various measures. These workers were generally less educated, of lower income, had fewer liquid assets relative to income, and were more likely renters. The data also showed that these workers experienced greater declines in employment during the pandemic. In relation to healthcare workers, WHS was described as "the thin line

protecting the front line” during the pandemic (Walker-Bone et al., 2020). However, given the role of WHS professionals in assessing, advising, and monitoring workers, this description is just as relevant for WHS professionals.

Occupational health professionals are also ideally placed to promote the importance of equity in organizations as they develop strategies and policies to deal with an ever-changing workplace of the future. This is never more important than in the case of vulnerable workers where WHS professionals have a key organizational role and a moral responsibility to encourage policies that improve social justice and reduce inequalities. Whilst vulnerable sections of the population are often considered in public health measures, they are not always considered in WHS initiatives as both entities are not always integrated in the workplace (Cote et al., 2021

References

1. Côté, D., Durant, S., MacEachen, E., Majowicz, S., Meyer, S., Huynh, A. T., ... & Dubé, J. (2021). A rapid scoping review of COVID-19 and vulnerable workers: Intersecting occupational and public health issues. American Journal of Industrial Medicine, 64(7), 551-566.
2. Tamin, J., Samuel, O., Suraya, A., Ebuenyi, I. D., Naicker, N., & Rajput-Ray, M. (2021). Vulnerable workers and COVID-19: insights from a survey of members of the international commission for occupational health. International Journal of Environmental Research and Public Health, 18(1), 346.
3. Select Committee on Human Trafficking in New South Wales (2017). Human trafficking in New South Wales. Sydney.
4. Mongey, S., Pilossoph, L., & Weinberg, A. (2021). Which workers bear the burden of social distancing?. The Journal of Economic Inequality, 19, 509-526.
5. Walker-Bone, K.; Channa, S.; Leeser, J.; Kause, J.; Skidmore, A.; Smedley, J. (2020) Occupational Health: The thin line protecting the front line. Occup. Med. (Lond.) 70, 292