



From the Guest Editor . . .

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This issue of *Occupational Health Southern Africa* illustrates the complexity of a competent person's knowledge and cognitive need to function in the world of occupational health. Scoping reviews, research studies, and legal implications are all part of the required regular training updates and prioritisation. The critical role that this peer-reviewed journal plays in continuing medical education (CME) in the sub-Saharan Africa region cannot be over-emphasised.

The five papers published in this issue have common threads, viz. occupational exposure to hazards (chemical, biological, and psychosocial) in various sectors; health risks and their implications; and the need for research, regulatory oversight, and improved preventive measures.

Schillack et al. discuss the urinary levels of the essential metals copper, zinc, and manganese in copper smelter workers exposed to arsenic, and in non-occupationally exposed residents in a nearby community. The authors showed that workers had higher levels of urinary arsenic than the reference group (up to three times as high). Differences in the concentrations of copper, zinc, and manganese were observed in both groups. The conclusion was that long-term arsenic exposure affects essential metal homeostasis, which can lead to harmful biological effects. Their findings are well aligned with recent studies in copper, lead-zinc, and steel-iron smelting environments and in populations exposed to environmental arsenic, which showed a disruption in metal regulation, with arsenic significantly impacting the metabolism of essential metals, potentially leading to oxidative stress and enzyme dysfunction.^{1,2}

Duba et al. conducted a review on biological exposures among horse grooms – a neglected group of workers in a thriving horse-racing industry. Horse stables are known to have elevated levels of organic dust, endotoxins, and fungal species, which have been linked to respiratory conditions such as asthma, chronic bronchitis, and organic dust toxic syndrome. Exposure to these hazardous biological agents poses a risk to horse grooms in their daily tasks of breeding, foaling, night watch duty, raising and training horses, mucking stalls, landscaping, and horse maintenance. Several studies have drawn parallels between the occupational risks faced by horse grooms and those seen in other animal-related industries, such as swine or poultry farming, where zoonotic diseases like brucellosis and avian influenza can be transmitted between animals and workers.^{3,4} Inadequate housing conditions such as overcrowding, often likened to those in the mining industry, further exacerbate the risk of disease spread, including tuberculosis. There is a growing call for more research on the health risks faced by horse

grooms, particularly in South Africa, where this group of workers is under-represented in occupational health studies. Improved housing conditions, better ventilation in stables, and stricter hygiene measures could help mitigate some of the biological exposures that threaten the health of these workers.

Mathenjwa and Naidoo report on chronic musculoskeletal pain (CMP) and associated psychosocial factors in municipal workers in northern KwaZulu-Natal province, South Africa. Their findings indicate a high prevalence of CMP of around 63% in the presence of associated psychosocial factors, with female workers and those having very demanding jobs being most at risk. Psychosocial factors play a significant role in exacerbating or mitigating pain symptoms. Studies indicate that high job demands, low job satisfaction, and stress contribute to the prevalence of CMP.⁵ In contrast, job satisfaction is often protective, reducing the likelihood of chronic pain. Globally, psychosocial resilience, including social support and coping strategies, has been identified as a mitigating factor for CMP. Targeted interventions addressing these factors may not only reduce pain but also improve overall brain health, as shown in studies linking resilience to reduced 'brain ageing' in chronic pain sufferers.⁶

In their short report on mothers and other women and girls (including domestic workers) who carry children for extended periods, Grobler et al. describe the pulmonary effects of using front face carriers. In this small study, they found that front face infant wearing might temporarily improve lung function, while also disrupting pulmonary mechanics. These findings need to be validated in a larger prospective study.

In the last paper, titled 'Cannabis at home, sobriety at work: legal and policy implications', Laurens explores the legal and policy implications of cannabis zero-tolerance strategies in workplaces, and advocates for scientifically established thresholds for substance testing, bearing in mind that workplace policies must respect employee rights while ensuring workplace safety, and also be aligned with South Africa's Cannabis for Private Purposes Act. Recent legal discussions in South Africa, regarding the use of cannabis at home and maintaining sobriety at work, have gained attention, particularly following the Labour Appeal Court's decision in the case of *Enever v. Barloworld Equipment South Africa* (April 2024).⁷ This recent court case set a precedent that employers must tailor drug policies carefully, balancing safety with constitutional rights and avoiding blanket zero-tolerance approaches that could lead to unfair dismissals.

These five papers call for improved prevention and monitoring measures, and further research, to better understand and mitigate exposures to occupational hazards. The importance of legislation and policies in the workplace cannot be accentuated enough in the development and implementation of frameworks to ensure workers' safety and wellbeing, while respecting employee rights.

Health education in the workplace as regular updated training can also be incorporated into, and aligned with, international health awareness days, some of which are celebrated during the months of September and October 2024:

- 17 September – World Patient Safety Day
- 21 September – World Alzheimer’s Day, World Marrow Donor/Sunflower Day
- 26 September – World Environmental Health Day; World Contraception Day
- 28 September – World Rabies Day, World Retina Day
- 1 October – International Day of Older Persons
- 10 October – World Mental Health Day
- 13 October – International Day for Natural Disaster Reduction
- 15 October – Global Handwashing Day
- 17 October – World Trauma Day, International Day for the Eradication of Poverty
- 30 October – Africa Food and Nutrition Security Day

REFERENCES

1. Hussain S, Khanam T, Ullah S, Aziz F, Sattar A, Hussain I, et al. Assessment and exposure analysis of trace metals in different age groups of the male population in Southern Punjab, Pakistan. *Toxics*. 2023; 11(12):958. doi: 10.3390/toxics11120958.

2. Wang X, Jin P, Zhou Q, Liu S, Wang F, Xi S. Metal biomonitoring and comparative assessment in urine of workers in lead-zinc and steel-iron mining and smelting. *Biol Trace Elem Res*. 2019; 189:1-9. doi: 10.1007/s12011-018-1449-0.
3. Gallagher LM, Crane J, Fitzharris P, Bates MN. Occupational respiratory health of New Zealand horse trainers. *Int Arch Occup Environ Health*. 2007; 80(4):335-341. doi: 10.1007/s00420-006-0141-4.
4. Dignard C, Leibler JH. Recent research on occupational animal exposures and health risks: a narrative review. *Curr Envir Health Rpt*. 2019; 6(4):236-246. doi: 10.1007/s40572-019-00253-5.
5. Yamada K, Fujii T, Kubota Y, Ikeda T, Hanazato M, Kondo N, et al. Prevalence and municipal variation in chronic musculoskeletal pain among independent older people: data from the Japan Gerontological Evaluation Study (JAGES). *BMC Musculoskelet Disord*. 2022; 23(1):755. doi: 10.1186/s12891-022-05694-y.
6. Holmes U, Tanner J, Addison B, Rangel K, Mickle AM, Garvan CS, et al. Chronic musculoskeletal pain, biobehavioral and psychosocial resilience index, and brain age gap. *J Int Neuropsychol Soc*. 2023; 29(s1):465. doi:10.1017/S1355617723006069.
7. Cliffe Dekker Hofmeyr. Navigating the legal landscape for private cannabis use and how that may impact the workplace: a case of unfair dismissal; 2024 May 13. Available from: <https://www.cliffedekkerhofmeyr.com/news/publications/2024/Practice/Employment/employment-law-alert-13-may-navigating-the-legal-landscape-for-private-cannabis-use-and-how-that-may-impact-the-workplace-a-case-of-unfair-dismissal-> (accessed 23 September 2024). 

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