

Working Towards Better Health in Africa: Where Should We Concentrate Research Efforts?

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Abstract

Research efforts are targeted towards infectious diseases that affect large numbers of people globally, outstripping research into non-communicable occupational diseases in smaller worker populations. Several studies have been conducted in the mining and construction industries, while the large agricultural and services sectors have been largely neglected. This is due, somewhat, to the geographical dispersal of agricultural workers, and diversity of those in the services sector. Africa's large and vulnerable informal worker population – many of whom are women or children – also deserve attention, to reduce their exposure to modifiable risk factors that affect their health. As technology progresses, opportunities for employment in new industries emerge, together with unique health and safety risks. Africa needs high quality research to protect workers and safeguard countries' economies.

Keywords:

Employment,
Agricultural sector,
Services sector,
Non-communicable diseases,
Vulnerable workers

Résumé

Les efforts de recherche sont ciblés sur les maladies infectieuses qui affectent un grand nombre de personnes dans le monde, dépassant la recherche sur les maladies associées avec des lieux de travaux non transmissibles dans les petites populations de travailleurs. De nombreuses recherches sur la santé ont été menées dans les industries minières et de la construction, tandis que les grands secteurs de l'agriculture et des services ont été largement négligés. Cela est dû, en partie, à la dispersion géographique des travailleurs agricoles et à la diversité de ceux du secteur des services. L'importante et vulnérable population de travailleurs informels d'Afrique - dont beaucoup sont des femmes ou des enfants - mérite également l'attention, afin de réduire leur exposition aux facteurs de risque modifiables qui affectent leur santé. À mesure que la technologie progresse, des opportunités d'emploi dans de nouvelles industries apparaissent, ainsi que des risques uniques pour la santé et la sécurité. L'Afrique a besoin d'une recherche de haute qualité pour protéger les travailleurs et sauvegarder les économies des pays.

Mots-clés :

Emploi, secteur agricole,
secteur des services,
maladies non transmissibles,
travailleurs vulnérables

Occupational health often falls off the agendas of company executives, unions and workers themselves, as other issues, such as increased wages and improved safety are seen to be more immediately important. While these issues certainly cannot be dismissed as being irrelevant, workers' health, specifically ill health, which can lead to death, needs to be taken more seriously. Infectious diseases, such as tuberculosis, HIV/AIDS and, more recently, COVID-19, have received much attention and scientific publicity, including in the mining industry. Although the prevalence rates of non-communicable conditions and diseases such as noise-induced hearing loss, and pneumoconiosis are

high, these more insidious conditions seldom find their way into the boardroom unless litigation is pending.

Some researchers have dedicated their lives and careers to studying the pathogenesis and/or epidemiology of specific occupational diseases. Much is now known about these aspects, as well as about control measures to mitigate the exposures that slowly but surely debilitate workers. For several reasons, diseases that have high incidence rates in large industries have been more frequently studied. First, if an exposure that is associated with disease can be controlled in a large industry, many workers will potentially be protected. Second, large numbers

of relatively homogenous workers are required for research findings to be valid. Third, the 'larger' the problem, the more likely it is that research will be funded. It therefore makes sense to concentrate research efforts in industries where many people are potentially affected by the chemicals, fumes, dusts, etc., that are emitted during the various production processes. Such research is also more likely to be of interest to a global audience and therefore published in scientific journals. Consequently, much has been published about exposures and the health (and causes of disease) of workers in large industries such as mining, construction, iron and steel, etc.

The most researched mine workers are those employed in gold, coal and asbestos mining (despite the ban of asbestos in many countries). Mine workers in other commodities, such as nickel, copper, uranium, cobalt, iron, silver, tanzanite, etc., have received little attention in terms of occupational health research. One commodity that has gained interest over the last few years, however, is manganese. Most of the world's manganese resources and mines are in South Africa. Although some manganese are mined in Gabon and the Birimian district of West Africa.¹

Approximately 12 000 manganese mine workers were employed in South Africa in 2020.² Research on the neurological effects of manganese exposure has shown that parkinsonian signs are associated with estimated cumulative Mn exposure.³ There is also evidence that environmental exposure to manganese from a ferro-manganese smelter in South Africa is associated with reduced cognitive performance,⁴ and may also be associated with clinical parkinsonism.⁵

While research into occupational diseases has concentrated on large industries, it is important to remember that there are other large employment sectors in Africa, e.g., agriculture and services. The International Labour Organization projected that employment in the agricultural sector in 2021 would be 50.3%, with 36.4% of workers employed in the services sector, and 13.4% in industry.⁶ The projected proportion of workers employed in the agricultural sector in southern Africa in 2021 was about 25% of that in Africa as a whole, however, at 9.1%. The projected proportion of workers in the services sector in 2021 in southern Africa was 68.6%.

Despite high employment in the agricultural sector, workers are not concentrated in locations in the same way as they are in the mining industry, for example.

Consequently, access to research participants, who are widely dispersed, is challenging. Under these circumstances, there is likely to be 'little return for maximum effort', which translates into a lot of time and money with no guarantee of valid or generalisable findings that could influence policy makers to improve working conditions.

Thus, workers continue to be exposed to extreme heat, ultra-violet radiation, chemicals (including pesticides), and other hazardous substances. The other large employment sector – the services sector – is very diverse, and includes tourism, vehicle repair, healthcare, teaching, transport, banking, advertising, film and media, apparel, and beauty, amongst others. The majority of worker groups (other than healthcare workers) are under-researched in terms of health. Another important occupational group to consider is employed in the large informal economy in Africa, which is the largest in the world.⁷ In 2019, pre-COVID-19, the rate of informal employment in Africa was 85.8%, and 40.2% in southern Africa.⁶

These three sectors have something in common, which is the employment of vulnerable workers, including women and children. For example, about 40% of agricultural labour in Africa is provided by women.⁸ An estimated 80% of workers involved in waste management in Uganda are women.⁹ About the same proportion of women work in the garment industry in Ethiopia,¹⁰ and the *kayayei* of Ghana and *alabaru* of Nigeria (or head porters) are all young women.^{11,12} Waste pickers/recyclers are most often homeless, living near waste dumps where the risk of exposure to hazardous biological and other waste is high.^{13,14} Many workers in the agricultural sector, and those involved in tourism, are seasonal workers who have short contracts and no job stability.^{15,16} There are many other examples of vulnerable worker populations.

In recent years, occupational health (and other public health) researchers have been turning their attention away from large industry workers to investigate the health (and safety) risks to which these lesser-researched worker groups are exposed.

The advent of the 'green economy' is providing new opportunities for employment in Africa and beyond, related to water, waste management, sustainable energy, tourism, agriculture and forestry.¹⁷ We cannot assume that workers in these novel occupations will escape exposure to hazards that may pose a threat to both their health and safety. It is our responsibility, as health researchers, to identify risks and prevent disease and other ill-health effects in this sector too.

While it is true that much research is fund-driven, as public health researchers we must convince funding organisations to look beyond the popular, highly financed health issues, and support research in smaller enterprises, and amongst vulnerable workers, and other neglected groups about whom we know very little but who have the right to work in healthy environments where the risk of illness is negligible.

There is plenty of opportunity for occupational health research, and other public health research in Africa. The continent is in dire need of trained and committed researchers (and robust research) to improve the health of all workers, in all sectors, in all countries.

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