



## The Role of Education and Training in Improving Occupational Health Practice in Southern Africa

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Globally, access to occupational safety and health (OSH) remains critically low at below 15% (1). Most African states do not have a National OSH Policy and very few countries have ratified the International Labour Organization (ILO) Conventions 155 on OSH and 161 on Occupational Health Services. On the continent, the biggest obstacles to OSH are due to political and legal inadequacies, a lack of priority for OSH, a scarcity of resources (financial, human and infrastructural), a lack of information and capacities for research and decision-making, and the lack of or limited availability of training and continuing education. The authors report on their OSH experiences in Southern Africa, where they have worked on several occupational health projects funded by the Global Fund, the African Union Development Agency – NEPAD (AUDA-NEPAD), the East, Central and Southern Africa Health Community (ECSA-HC) and the United States Agency for International Development (USAID), the National Institute for Occupational Health in South Africa and Baines Occupational Health Services in Zimbabwe.

There are several challenges that negatively affect the development of OSH in Sub-Saharan Africa (SSA). Lack of education and training programs in OSH is a major challenge constraining the development of OSH in SSA. Education involves acquiring new knowledge and skills in a specific subject, like OSH, through formal programs that lead to certificates, diplomas, or degrees. In contrast, OSH training focuses on equipping individuals with specific skills and knowledge tailored to their organization, job role, or tasks, typically conducted in the workplace (2). This is despite the fact that countries such as Nigeria, South Africa, Uganda, Zambia, Zimbabwe and many others offer training in the field of OSH, but the number of academic institutions at the country level remains critically low (Table 1). For example, in the whole of the Eastern, Central and Southern Africa region, only South Africa offers specialized training in Occupational Medicine, Occupational Hygiene and Occupational Health. In most countries in the region, authorities have still not recognized Occupational Medicine and Occupational Health as disciplines requiring independent medical specialty registration, which hinders the development of occupational health services.

The development of good OSH policies and legal frameworks requires competent professionals in the field of OSH. In most SSA countries, OSH legislation is fragmented and inadequate,



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with few countries having ratified the key ILO Conventions 155 and 161 on OSH and Occupational Health Services respectively. For example, in Southern Africa, only Zimbabwe has ratified both ILO Convention 155 and 161, and almost all the countries have not yet ratified ILO Convention 161. This reflects the poor stewardship, leadership and OSH commitment by ILO member states in Southern Africa on OSH. There is a severe shortage of human resources in the field of Occupational Medicine. With the exception of South Africa and Mozambique, most countries in Southern Africa have fewer than five qualified occupational health physicians.

As mentioned above, most of the aforementioned challenges in OSH that SSA faces are largely due to the lack of education and training. This further complicates the development of institutional and organizational memory in most settings leading to a lack of improvements and lessons learnt in the field. Training and education play a critical role in transforming the landscape of OSH practice. Policy and legal reforms in OSH can only be championed by competent OSH practitioners and professionals. Ministries require strong advocacy on OSH and this can be positively driven by competent OSH practitioners and professionals.

An expansion in education and training in OSH is a critical process that can lead SSA into improving access to OSH. Countries must implement education and training programs in the multiple disciplines of OSH, including Safety, Occupational

Hygiene, Occupational Health Nursing (OHN), Occupational Medicine (OM) and many others. Developing a critical mass of multi-professional disciplines in OSH through education and training can positively transform systems at country level in a number of ways. This can lead to improved and intelligent advocacy for the ratification of ILO conventions and improvements in OSH policy and legal frameworks. Competent OSH professionals will be able to conduct quality workplace hazard identification and risk assessments.

There is an urgent need for institutions of higher education to introduce specific education and training programs in Safety, Occupational Hygiene, OHN, OM, and Ergonomics among many others. It is vital that educational institutions, employ-

ers, workers and governments in SSA advocate for more training programs in OSH to influence positive changes at the regulatory level, in key ministries responsible for OSH, and the implementation of good practices across all workplaces. Educational institutions in SSA can use the existing systems and educational resources to expand OSH. There have been significant improvements in the field of OSH in Southern Africa, although much remains to be done. Organizations such as the Global Fund, World Bank AUDA-NEPAD, ECSA-HC, USAID among many others have assisted in developing capacity in OSH. It is high time that educational institutions in Africa take advantage of this momentum to design contextually relevant programs and courses that are spread across countries. Table 1 below shows the situation in some selected SSA countries.

Table 1: Status of OSH in selected SSA countries

Country	Training in OHN	OHN is a registrable qualification?	Training in OM	OM as a registrable qualification	Occupational Hygiene	Ergonomists	Undergraduate and Post Graduate Training in OSH	Other related courses offered
Cameroon	No	No	No	No	No	0	No	<ul style="list-style-type: none"> <li>The University of Buea offers a Master of Public Health with a specialty track in Occupational and Environmental Health.</li> <li>The University of Douala, like many private universities in the French speaking areas, offers a Master of Science in Quality, Safety, Health and Environment.</li> </ul>
Lesotho	No	No	No	Yes	No	-	No, but only as an undergraduate Diploma	
Rwanda	No	No	No	No	No	0	No	
Somalia	No	No	No	No	No	No information	No	
Uganda	No	-	No	Yes, as an additional qualification	No	No information	No	<ul style="list-style-type: none"> <li>The University of Makerere offers a Master of Environmental and Occupational Health degree.</li> </ul>
South Africa	Yes	Yes	Yes	Yes	Yes	>10	Yes	<ul style="list-style-type: none"> <li>More than 6 universities offer training in all the various disciplines.</li> </ul>
Zimbabwe	No	No	No	Yes	No	<5	Yes	<ul style="list-style-type: none"> <li>The Midlands State University offers a post graduate Diploma and a Master's degree in safety, health and environment.</li> <li>The Bindura University of Science and Technology, Great Zimbabwe University and University of Zimbabwe offer training in occupational health and safety.</li> </ul>
Nigeria	Yes	Yes	No	No	No	<10	Yes	<ul style="list-style-type: none"> <li>University of Port Harcourt in Nigeria offers Occupational Safety and Health.</li> <li>The University of Ibadan offers occupational health nursing training and a Master degree in OSH.</li> </ul>

Outside South Africa, most academic institutions lack a comprehensive array of OSH programs to serve their nations effectively. As highlighted in Table 1, educational institutions in Sub-Saharan Africa face significant challenges. A primary concern will be their ability to develop capacity across various OSH disciplines, which is currently limited. Furthermore, the increase in health emergencies caused by infectious diseases and the impact of climate change on the health and safety of workers requires a strategic repositioning of higher education institutions to meet this emerging demands. At present, occupational health and safety management systems in many African countries are fragile and lack resilience.

In conclusion, education and training are pivotal to transforming the OSH landscape, but the current infrastructure is still inadequate. The scarcity of qualified professionals and the fragmentation of legislation hinder effective advocacy for necessary reforms. To overcome these challenges, it is essential to establish educational programs that can build a robust workforce capable of addressing OSH and influencing policy changes. Collaboration among educational institutions, governments, employers, employees and international organizations presents a way forward. By harnessing available resources and focusing on developing contextually relevant education and training programs, SSA can cultivate a new generation of OSH professionals capable of advocating for improved OSH standards. With coordinated efforts and strategic investments in education and training, the region can strengthen its OSH systems, ensuring a safer and healthier work environment for all.

## Literature

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