



Re-Building Sudan AFTER THE WAR

GOOD HEALTH AND WELL-BEING

 OPEN ACCESS

DOI: 10.47556/B.SUDAN2025.7

CHAPTER

07

REVIEW

War and Health Profession in Sudan: Impact and strategies for resilience

Dr Mohamed Ahmed Agab

*Internal Medicine Consultant, University of Kordofan, Sudan
Consultant Physician in Somaliland, Somaliland
Email: m.a.agab152@gmail.com
ORCID: 0000-0002-0954-0201*

Dr Abualaz Hassan Ibrahim Abdullah

*Community Medicine Department, Faculty of Medicine and Health Sciences, University of Kordofan
Director National Health Insurance Fund (West/North Kordofan) and Supervisor Sheikan Medical Insurance
Company (Khartoum Sector), Sudan
Email: aboelez777@gmail.com
ORCID: 0009-0000-5434-1124*

Dr Hashim Gibreel Ismaeil Teeso

*Consultant General and Laparoscopic Surgeon, Sudan
Email: hashimism76@gmail.com
ORCID: 0009-0000-8746-8092*

Dr Walleed Hamza Mohammed Ali

*Assistant Professor, Kordofan University
Internal Medicine Specialist, Elobied Teaching Hospital, Sudan
Email: waleedhamza126@gmail.com
ORCID: 0009-0008-1710-9201*

Dr Zolnon Mohamad Gebril

*Specialist in Emergency Medicine, University of Kordofan and Founder Sudanese Healthcare Organization, Sudan
Ahalia Hospital, UAE
Email: zolnon.mohamud@gmail.com
ORCID: 0000-0002-9684-7171*

Dr Tagwa Saeed Ibrahim Badawe

*Academic Cooperative Lecturer, University of Kordofan
Director Kordofan Breast Cancer Campaign, Sudan
Email: tagwasaeed87@gmail.com
ORCID: 0000-0002-0954-0201*

CITATION: Agab, M.A., Abdullah, A.H.I., Teeso, H.G.I., Ali, W.H.M., Gebril, Z.M. and Badawe, T.S.I. (2025): War and Health Profession in Sudan: Impact and strategies for resilience. In Ahmed, A. (Ed.): *Re-Building Sudan from War to Sustainable Development*, Vol 1, pp. 97-107

RECEIVED: 10 May 2025 / **REVISED:** 29 July 2025 / **ACCEPTED:** 3 August 2025 / **PUBLISHED:** 1 December 2025

COPYRIGHT: © 2025 by all the authors of the chapter above. The chapter is published as an open access chapter by WASD under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ABSTRACT

PURPOSE: This chapter explores the devastating impact of Sudan's 2023 war on Health Professions Education (HPE), identifying critical challenges and proposing strategies for rebuilding resilient, Sustainable Development Goal (SDG) aligned medical education systems.

DESIGN/METHODOLOGY/APPROACH: The literature review used case studies (e.g., University of Kordofan), literature reports (WHO, UNESCO), and expert insights. The chapter also analyses damage to infrastructure, human resource loss, curriculum disruption, and psychological trauma.

FINDINGS: The war damaged 60% of medical facilities, displaced the majority of educators and led to widespread curriculum breakdowns, significantly undermining the clinical competency of graduates. Most students and faculty endured severe psychological distress as a result of the conflict.

ORIGINALITY/VALUE: The chapter proposes a post-conflict HPE framework that integrates SDGs, gender-inclusive curricula, diaspora-led mentorship, digital integration and crisis-responsive education models.

RESEARCH LIMITATIONS: Findings are limited by conflict-related data gaps and reliance on localised case studies.

PRACTICAL IMPLICATIONS: Recommendations include building public-private partnerships, expanding digital learning, supporting mental health, and engaging diaspora professionals to rebuild capacity.

KEYWORDS: *Health Professions Education (HPE), Sudan 2023 War, Post-Conflict Reconstruction, Healthcare Workforce Displacement, Sustainable Development Goals (SDGs).*

INTRODUCTION

On 15 April 2023, a devastating conflict erupted in the Republic of Sudan between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF), constituting one of the most catastrophic humanitarian crises in the world; it was characterised by urban warfare, mass displacement, and widespread destruction of critical infrastructure. The war has overwhelmed access to healthcare, education, and livelihoods, setting the country's development back significantly. Within Sudan's population, 25 million people need immediate humanitarian aid, and over 9 million have been forcibly displaced (UN OCHA, 2024). With 19 million children not attending school and 70% of medical institutions in conflict areas non-operational, the healthcare and education sectors have been particularly hard hit (UN OCHA, 2024; UNICEF, 2023).

This catastrophe has severely disrupted ongoing efforts towards the Sustainable Development Goals (SDGs), particularly SDG 3 (good health and well-being) and SDG 4 (quality education). The partial or complete destruction of Health Professions Education (HPE) facilities represents a critical threat, obstructing the professional development of healthcare providers and delaying the exchange of essential health education knowledge. This breakdown not only challenges current health education capability but also threatens long-term system strength, stalling post-conflict recovery efforts. It also jeopardises specific SDG targets such as 4.3 (equal access to technical education), 4.4 (skills for employment), 3.1 (maternal health), 3.d (epidemic preparedness), and 3.8 (universal health coverage), making the renovation of HPE urgent, both country-based and internationally.



Medical education in Sudan serves as a cornerstone in the health sector throughout all aspects of health, such as healthcare prevention, delivery, promotion, and monitoring. Clinical settings (e.g., teaching hospitals) and non-clinical institutions (e.g., universities) play a cornerstone role in HPE and development. However, the catastrophe of the ongoing armed conflict has generated distinct catastrophic effects such as infrastructure destruction, loss of human resources, curriculum delivery interruption, and inflicting psychological trauma on both students and educators. The consequences of such impacts reflect directly upon the maintenance and future of health care provision in Sudan, as the breakdown and damage to HPE are still ongoing, eroding the integrity of the healthcare sector (WHO, 2024). The armed conflict has persisted for over two years, leaving an obliterated health education sector that needs a long time to recover and rebuild.

This chapter will review the most significant consequences and impact of this catastrophe, focusing on three dimensions. The destruction of the educational infrastructures, displacement of health care workers (HCWs), interruptions to curriculum delivery, and psychological effects on both the educators and their students will be explored. The chapter proposes evidence-based post-war strategies to rebuild and optimise the HPE sectors, including infrastructure rehabilitation, capacity building, curriculum enhancement, student support, and the adoption and acceleration of HPE-related SDGs. To finish, the chapter will identify anticipated strategic implementation challenges so the leaders and managers concerned can anticipate and manage them.

Disruption of Educational Infrastructure

Throughout Sudan, the war has resulted in extensive damage to the educational infrastructure. All sectors of education, whether in the form of universities, medical schools, or teaching hospitals, have been directly or indirectly compromised. The obliteration of teaching hospitals has profoundly affected HPE and clinical training, as these health care facilities in Sudan serve as the primary venues for clinical micro- or macro-teaching. They represent the area for supervision practice. Many hospitals housed dedicated lecture halls and conference rooms, fully equipped with projectors and sound systems for teaching.

Numerous institutions in Sudan, currently and historically renowned for their academic contributions, e.g., Khartoum University, have been directly involved in the conflict and have shut entirely (see Figure 1), suffering functional and structural destruction (see Figure 2); this has caused a complete halt to the continuity of health education. Libraries were burned, laboratories (see Figure 3) and classrooms (see Figure 4) were damaged, and others were repurposed as military barracks. According to WHO EMRO (2024), over 60% of medical training facilities have been severely damaged or entirely destroyed, leaving vast areas without functional teaching environments.



Figure 1: Structural damage of the Faculty of Medicine main entrance portico, Khartoum University

Source: Alhadath TV Channel report (24 April 2025)



Figure 2: Classroom damage, Faculty of Pharmacy, Khartoum University

Source: Alhadath TV Channel (24 April 2025)



Figure 3: Non-functional Pharmaceutical Laboratory, Faculty of Pharmacy, Khartoum University

Source: Alhadath TV Channel (24 April 2025)



Figure 4: Alshaab Teaching Hospital: Structural Failures

Source: Alhadath TV Channel (24 April 2025)

In active combat zones, many educational facilities were repurposed as munitions depots and weapons stores, and higher buildings, particularly in Khartoum (the conflict's epicentre), were occupied by snipers. Elobeid City, the capital of North Kordofan state, was subjected to a long-term military siege that resulted in a shortage of essential drugs, foodstuffs and a stoppage of lifesaving healthcare services. This siege crippled HPE, causing severe staff shortages and student attrition as entering or exiting a siege zone is perilous. Delayed or suspended salaries, incentives, and regular logistic support drastically impacted the integrity of the healthcare system.

Displacement of staff and students led to a loss of clinical exposure, and this created a significant gap in practical skills, compromising students' future ability to deliver high-quality healthcare (Mohamed *et al.*, 2025). Even institutions outside active conflict zones often lacked resources to sustain professional education. The lack of access to functional clinical environments for training and practice has exacerbated strains on the healthcare system, leading to a decline in continuous professional development and improvement.

The Burden on Human Resources

Skilled educators, leaders, or managers have been directly affected by the war in all different specialties of HPE. The war caused severe disruptions to basic services, including electricity, water, and the Internet, prompting many health profession educators to search for safer places to provide basic needs. Health professions (HP) educators have been unable to access institutions, posing significant risks due to safety concerns, especially in areas within war zones. This has critically undermined the capacity of institutions to sustain regular education programmes.

Faculty and clinical tutors have fled their original workplaces seeking safety and educational opportunities for their families; this has led to a critical shortage of education managers and mentors within Sudan's HPE system (Iraqi *et al.*, 2024). The post-war shortage of HP educators has become evident, and this brain drain phenomenon has profoundly impacted both academic education and clinical training: the few remaining professionals are often overburdened and under-resourced.

This shortage adversely affects academic leadership as well as key role models exemplifying professionalism and clinical excellence. The absence of incentives, professional and personal development opportunities, and supportive working conditions has undermined efforts to foster an adequate educational environment. The conflict has hindered collaboration with international medical education organisations and strategic partnerships with relevant organisations and institutes; these can facilitate regular training and capacity building and could mitigate war-induced gaps (Ahmed *et al.*, 2024). These examples highlight some of the devastating consequences of the war on human resources in HPE institutions, thereby diminishing educational quality.

Interruption of Curriculum Delivery

The war, which involved most areas of Sudan, disrupted the delivery of the health education curriculum at both sectoral and national levels. Most activities in educational institutions are conducted face-to-face. Regrettably, all these activities have been suspended, as numerous facilities have either been rendered non-operational, damaged, or repurposed for military use. In some areas, institutions attempted to adopt modified curricula to meet the immediate obstacles posed by the conflict, such as digital or virtual tools in the process of education for certain universities. However, these efforts lack robust virtual platforms, and most areas of ongoing conflict suffer from a shortage of Internet supply and robust network coverage.

The disruption in curriculum delivery raised significant concerns about students' risk of graduating without mastering essential competencies in critical areas such as clinical skills, leaving them ill-prepared to meet the demands of healthcare practice. Prolonged interruptions have left students unable to engage meaningfully with the curriculum content, and educators struggle to deliver structured training, further exacerbating the disruption to HPE (Mohamed *et al.*, 2025).

The combined disturbance of face-to-face education and the lack of sufficient virtual options have significantly impaired the preparedness of many graduates for clinical practice. The effects of the war are particularly evident in the obvious shortages in clinical competencies, further compounded by ongoing challenges in pursuing both pre- and post-graduate medical education. These curriculum gaps not only undermine new graduates' confidence to provide effective health care but also affect the long-term sustainability of the healthcare system. This is because the next generation of healthcare professionals will be deprived of critical skills and experience.

Psychological Impact on Students and Educators

The armed conflict in Sudan exemplifies a concerning model of warfare that targets civilians, resulting in non-combatant populations facing excessive violence and human rights abuses. Military operations have directly entangled non-combatants. As a consequence, a spectrum of psychological trauma has been noted, ranging from anxiety and depression to burnout and post-traumatic stress disorders (Mohamed *et al.*, 2025). HP educators exposed to chronic violence and displacement have left HPE institutions struggling to maintain academic performance, exacerbating institutional challenges to educational institutions.



Many faculty members, who are themselves coping with trauma, are often unable to offer the psychological and professional support that students need, perpetuating a cycle of distress that weakens the educational environment. One of our colleagues, a lecturer at the Faculty of Medicine and Health Sciences at the University of Kordofan, lost her beloved nine-year-old son, who was fatally shot in the head in front of her. In North Kordofan state and Elobied Teaching Hospital, several colleagues sustained injuries, and we regrettably lost a young first-year medical student, the son of one of our colleagues.

The principal author of this chapter was not spared from the devastating impact of this war; his wife, the mother of his only daughter and three sons, was shot in the neck during an armed robbery they encountered while travelling in search of safety when they crossed through an area occupied by the Rapid Support Forces. She is a consultant physician, and this event traumatised her, her family, and her colleagues in HPE.

STRATEGIES FOR REBUILDING HEALTH PROFESSIONS EDUCATION

Infrastructure Rehabilitation

Infrastructure, the backbone of effective medical education, is critical for hands-on clinical exposure and skill acquisition. Teaching hospitals in Sudan and university classrooms are key factors in providing clinical exposure and continuing professional development. There is widespread destruction of the educational infrastructure in Sudan; this has directly undermined HPE that will require a collaborative and substantial effort to rebuild, rehabilitate, and maintain HPE integrity. Well-structured, short- and long-term strategic partnerships with international organisations such as the World Health Organization (WHO) and United Nations Educational, Scientific and Cultural Organization (UNESCO), as well as non-governmental organisations (NGOs), are critical to securing financial and technical support (Yue *et al.*, 2022).

One of the most effective factors in the status of post-war rehabilitation and maintenance for HPE is to establish strategic public-private partnerships that play a key role in enhancing resource mobilisation and encouraging local investment, which were prominent pre-war. Given the severe funding deficits during the war, such collaborations help in securing funding opportunities, sustain strategic funding streams, promote infrastructure development, and develop solutions for rehabilitation and reconstruction efforts. As many students have been displaced, we also encourage educational leaders to establish strategic, innovative partnerships with regional universities around Sudan, as well as international universities.

Community-driven initiatives represent a critical component of post-conflict HPE reconstruction. Local stakeholders, including civic leaders, prominent figures, and private investors, possess the capacity to make substantive contributions to sustainable development efforts through participatory engagement in HPE rehabilitation programmes (Dongier *et al.*, 2003). Building HPE post-war is a collaborative effort among all stakeholders to improve the efficacy of rehabilitation initiatives and promote sustainable growth in HPE.

Human Resource Capacity Building

The catastrophic war in Sudan that began in April 2023 has led to a significant depletion of human resources within the HPE sector. Educators, clinical mentors, and skilled professionals have either been internally displaced or have left the country, leading to critical shortages in both teaching and healthcare delivery. Promoting long-term recruitment plans, retention policies, and continuous professional development is critical to address human resource gaps. Strengthening this domain fosters a robust structural and professional education platform.

More strategic efforts are needed to support capacity building, as only replacing lost staff is not enough for HPE integrity; upgrading skills and competencies are also required to meet post-conflict developmental challenges. Retention requires financial and non-financial factors, such as offering competitive salaries, housing support, and career development opportunities to attract and retain educators (Kiptulon *et al.*, 2024), specifically the HP educators displaced outside Sudan. The Ministry of Higher Education (MHE) and all concerned partners need to provide a safe and supportive working environment as a key strategic plan to encourage well-equipped educational managers and leaders to stay or return; priority must be given to safety and mental well-being.

We recommend more international and national diaspora engagement, as this may establish a supportive framework and address the crucial educational gaps in post-conflict Sudan. It is crucial for education leaders to provide more strategic tools to mobilise Sudanese healthcare professionals abroad through virtual teaching and mentorship; this can help to bridge the gaps in human resource shortages and overcoming obstacles requiring the physical presence of displaced professionals and students.

Curriculum Delivery and Digitalisation

Two years have passed since the conflict began in Sudan, and this has gradually disrupted HPE structure and organisation. The health education facilities have been directly affected, rendering them unable to deliver a consistent curriculum within the proposed time frame. HPE institutions need to revise curricula to address current healthcare challenges and adapt to post-conflict realities; they also need to prepare students to deal effectively with adopted post-conflict challenges. We encourage integrating curriculum reform with digital platforms. Incorporating digital tools can help bridge access gaps, facilitate distance learning, particularly for displaced students and faculty, and maintain continuity of the education process (Bajger *et al.*, 2025). These reforms are needed for rebuilding a more accessible and adaptive health education system. A strategic approach to curriculum reform should ensure relevance, flexibility, and virtual tool utilisation.

Key objectives for curricular reform include:

- design competency-based curricula;
- align curricula with current healthcare needs;
- implement competency-based assessments;
- integrate digital tools and e-learning platforms;
- develop modular, flexible curricula;
- prioritise simulation-based and virtual training;
- incorporate crisis-responsive content.

Student Motivation and Support Policy

Mental health challenges associated with the Sudan war require a comprehensive and strategic programme, including psychological resilience exercises and specialised mental health services for both students and staff (Taha *et al.*, 2025). This could include face-to-face or virtual counselling, a post-traumatic stress management campaign, and personalised support programmes for specific conditions.

Integrating mental health education into curricula is recommended to enhance students' awareness, support an effective learning environment, and prepare students to absorb the war's emotional shocks. HPE institutions must prioritise the well-being of both students and educators as this is critical to maintaining an effective teaching and learning environment. MHE and HPE leaders and managers should direct all their efforts to be student support-centred, not facility-centred, as the post-war student population is very wide and deeply fragmented. Supporting students by creating new distance learning initiatives and collaborative university hubs abroad where displaced students can join and continue the mission of learning is crucial, as are new strategic partnerships with universities, medical schools, and even broad governmental bodies in all aspects of student requirements. These requirements range from distance education platforms and virtual competency evaluations to structured scientific research initiatives and international academic exchange programmes.

Community-based initiatives can participate effectively in student motivation; engaging local communities helps students understand their social responsibilities, educators can deal with the challenges facing community development, and it helps align educational content with crisis context. Community-led initiatives should be prioritised in sharing responsibility, supporting both students and educators in maintaining the integrity of HPE. Based on our experience, engaging local and national communities in HPE decision-making, student support, and follow-up can effectively support and maintain HPE's mission.

Adoption and Acceleration of the HPE-Related SDGs

Our HPE in Sudan must be promoted to prioritise UN SDGs to ensure quality education, competency development, and accountability. Education leaders and managers must align post-war rehabilitation with global development objectives. By adopting and accelerating HPE-related SDGs, such as SDG 3 (Health), SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), SDG 16 (Peace, Justice, and Strong Institutions), and SDG 17 (Partnerships), the healthcare system in Sudan can be rebuilt, transformed, and strengthened.

SDGs acceleration priorities include:

- advance digital transformation and innovation (SDG 4);
- strengthen human resource development (SDG 8);
- expand community-oriented medical education (SDG 3, SDG 10);
- integrate peace and governance principles (SDG 16) into HPE;
- foster strategic partnerships (SDG 17).

Table 1: Strategies and Their Implementation Challenges

Strategy	Main Implementation Challenge
Infrastructure Rehabilitation	Rehabilitation personnel safety risks, unsafe logistics transport, short- and long-term funding shortages
Human Resource Capacity Building	Displacement of HP educators, security risks, limited funding, insufficient leadership capacity, misalignment with SDG priorities
Curriculum Delivery & Digitalisation	Unstable network coverage, limited Internet access, inadequate virtual infrastructure, limited faculty training in digital pedagogy
Student Motivation & Support Policy	Unsafe physical attendance, limited virtual student-faculty engagement, under-developed community-based faculty initiatives, mental health stigmatisation
Adoption and Acceleration of HPE-Related SDGs	Inadequate institutional monitoring tools, limited resources, absent frameworks for SDG integration

Source: Constructed by authors

CONCLUSIONS

The ongoing war in Sudan has had a catastrophic impact on HPE, including infrastructure damage, displacing both students and faculty members, interrupting curriculum delivery, and leaving psychological trauma on both HP educators and their students. As a consequence, the structural integrity and organisational flow of the HPE system have been directly altered; this has reversed progress in healthcare provision and the progress towards key SDGs in Sudan.

Despite the destruction, there is the possibility of creating a health education system that is more accessible, resilient, and responsive. Implementing strategies to rehabilitate infrastructure, strengthen human resources, reform curricula, and support students and educators is critical. The intentional integration of HPE development priorities with SDGs offers Sudan an evidence-based roadmap for sustainable recovery of its healthcare education system. This process requires co-ordinated action, sustained investment, and strategic engagement of local, national, and international stakeholders.

Numerous challenges may obstruct the road to recovery, including ongoing conflict, lack of safety, ongoing displacement of HPEs and students, limited funds, disrupted network coverage, and limited Internet access. Several systemic issues arise, including inadequate technology resources for digital transformation, limited frameworks for local community engagement, and insufficient performance monitoring methodologies, all among material and financial constraints. HME, UN, NGOs, HP educators, community leaders, and all other relative stakeholders need to address these challenges to safely implement strategies that can rebuild a system that can absorb ongoing and future shocks, ensure the continuity and integrity of HPE, and uphold the right to health and education for all Sudanese.



REFERENCES

- Ahmed, A.A.H., Eltahir, S.E.A., Alabass, S.O.A. and Osman, F.H.M. (2024): The ravages of war: Challenges and resilience in medical education in Sudan. *Education for Health*, Vol. 37, No. 3, pp.270-276. Available at: <https://educationforhealthjournal.org/index.php/efh/article/download/154/137?inline=1>
- Bajger, T., Khoshnaw, D., Ali, K.A.A. and Mousa, K.M. (2025): Impact of digital transformation on rehabilitating higher education infrastructure in conflict-affected settings. *European Journal of Education*, Vol. 60, No. 3, p.e70151. Available at: <https://onlinelibrary.wiley.com/doi/10.1111/ejed.70151?af=R>
- Dongier, P., van Domelen, J., Ostrom, E., Rizvi, A., Wakeman, W., Bebbington, A., Alkire, S., Esmail, T. and Polski, M. (2003): Community-Driven Development. *World Bank Poverty Reduction Strategy Paper* (Chapter 9, pp.303-327). World Bank. Available at: https://www.researchgate.net/publication/324175005_Community-Driven_Development
- Iraqi, H., Ali, M. and Mahgoub, O. (2024): War-Torn Sudan's Medical Training Nightmare. *Global Health Now* [Online]. Available at: https://globalhealthnow.org/2024-10/war-torn-sudans-medical-training-nightmare?utm_source=chatgpt.com
- Kiptulon, E.K., Elmadani, M., Onchuru, M.P., Szöllösi, A., Zrínyi, M. and Siket, A.U. (2025): Retaining nurses in Sub-Saharan Africa: A systematic review and meta-analysis. *International Journal of Nursing Sciences*, Vol. 12, No. 3, pp.301-309. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC12168464/>
- Mohamed, T.K., Abdalla, T.O., Ahmed, S.G., Elnaem, A., Omer, T.M., Hassan, T.H., Mamoun, N.S., Musa, M.A., Zaidan, A.E., Omer, S.M. and ElKhwad, A.O. (2025): Medical education under siege: The war's impact on medical and paramedical Sudanese students. *BMC Medical Education*, Vol. 25, No. 1, p.861. Available at: <https://doi.org/10.1186/s12909-025-07457-4>
- Taha, M.H., Husain, N.E.O.S.A., Mukhtar, W.N.O. and Abdalla, M.E. (2025): Adaptive strategies of a medical school during Sudan's armed conflict. *BMC Medical Education*, Vol. 25, No. 1, p.629. Available at: <https://bmcomeduc.biomedcentral.com/articles/10.1186/s12909-025-07027-8>
- United Nations Educational, Scientific and Cultural Organization (UNICEF) (2023): *19 million children in Sudan out of school as conflict rages* [online press release]. Amman: UNICEF Jordan and Save the Children. Available at: <https://www.unicef.org/press-releases/19-million-children-sudan-out-school-conflict-rages-unicef-save-children>. Accessed on 9 April 2025
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2024): *Sudan: One-year of conflict: Key Facts and figures*. OCHA [Online]. Available at: <https://www.unocha.org/publications/report/sudan/sudan-one-year-conflict-key-facts-and-figures-infographic-15-april-2024>
- World Health Organization (WHO) (2024): *Public Health Situation Analysis: Sudan conflict*. WHO/SDN/HPE/2024 [Online]. Available at: [https://www.who.int/publications/m/item/public-health-situation-analysis--sudan-conflict-\(01-september-2024\)](https://www.who.int/publications/m/item/public-health-situation-analysis--sudan-conflict-(01-september-2024))
- World Health Organization Regional Office for the Eastern Mediterranean (WHO EMRO) (2024): *Sudan surpasses 100 attacks on healthcare since 2023 armed conflict began*. WHO EMRO [Online]. Available at: <https://www.emro.who.int/media/news/in-sudan-there-have-been-more-than-100-attacks-on-health-care-since-the-armed-conflict-began.html>
- Yue, L., Ye, M. and Chen, Q. (2022): The impact of partnerships and information sharing on corporate sustainable performance: a mediation model moderated by government support. *Frontiers in Psychology*, Vol. 13, p.942279. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC9311420/>

BIOGRAPHY



Dr Mohamed Ahmed Agab is an Internal Medicine Consultant and Medical Educator with over 20 years of experience in clinical practice, academia, and research. He holds a Medical Doctorate in Internal Medicine (Sudan Medical Specialization Board, 2004) and a Master's in Health Professions Education (University of Gezira, 2022). Dr Agab has served as Dean of the Faculty of Medicine at the University of Kordofan (2019-2023) and Head of Internal Medicine (2017-2019). His research spans Hepatitis B prevalence, dengue fever epidemiology, food allergy perspectives, snakebite remedies, warfarin dosing, stroke CT findings, and rheumatology case studies. A dedicated mentor, he has supervised numerous undergraduate and postgraduate studies in healthcare and medical education. Currently a Consultant Physician in Somaliland, Dr Agab is fluent in Arabic and English and remains committed to advancing medical education and patient care.



Dr Abualaz Hassan Ibrahim Abdullah is an Assistant Professor and Head of the Community Medicine Department at the University of Kordofan's Faculty of Medicine and Health Sciences. A Public Health and Environmental Health Specialist, he holds a Master's and PhD in Public Health and has over 10 years of teaching experience. Dr Abdullah has held leadership roles as Director of the National Health Insurance Fund (West/North Kordofan) and Supervisor for Sheikan Medical Insurance Company (Khartoum sector). His expertise spans health systems management, financing, and policy planning, with research visits to Ghana, Rwanda, Pakistan, and Beirut. He has published on dengue fever, cervical cancer, and ectopic pregnancy, while actively supervising student research. Fluent in Arabic and English, he excels in public speaking, teaching, and communication.



Dr Hashim Gibreel Ismaeil Teeso is a Consultant General and Laparoscopic Surgeon with over 12 years of clinical experience. He holds an MD in General Surgery from the Sudan Medical Specialization Board (2011), MRCS qualifications from the Royal College of Surgeons of Edinburgh (2006-2007), and a Diploma and Fellowship in Minimal Access Surgery from the World Laparoscopy Hospital, India (2013). Additionally, he earned a Master's in Health Professions Education from the University of Gezira (2022). Dr Hashim has held leadership roles as Head of General Surgery at Elobeid Teaching Hospital (2014-2018) and Head of the Surgery Department at the University of Kordofan (2019-2023). He is a member of the Council of General Surgery at the Sudan Medical Specialization Board. His research focuses on Palliative Treatment of Unresectable Pancreatic Cancer and Outcomes of Laparoscopic Cholecystectomy in Low-Resource Settings. He has supervised numerous undergraduate and postgraduate students and currently serves as a Consultant General and Laparoscopic Surgeon at Alami Hospital, Mogadishu. Fluent in Arabic and English, Dr Hashim combines surgical expertise with academic leadership.



Dr Walleed Hamza Mohammed Ali is a board-certified Internal Medicine Specialist with a Clinical MD from the Sudan Medical Specialization Board (2021). Currently based in Mogadishu, Somalia, he brings over a decade of clinical and academic experience, including roles as an Assistant Professor at Kordofan University (2021-present) and Internal Medicine Specialist at Elobied Teaching Hospital, Sudan. His expertise spans hypertension management, evidenced by his memberships in the International and Sudanese Societies of Hypertension, where he co-ordinated the May Measure Month (MMM-22) campaign. Dr Hamza has contributed to curriculum reviews, supervised student research, and participated in workshops on e-learning, OSCE optimisation, and scientific writing. His career includes rotations in Saudi Arabia and extensive training in neurology, rheumatology, and research methodology. Fluent in English and Arabic, he combines strong analytical skills with a commitment to patient-centred care and medical education.



Dr Zolnon Mohamad Gebril Specialist in Emergency Medicine with a strong background in clinical practice and medical education. He holds an MD in Emergency Medicine, an MD in Medical Education, and an MBBS, and has passed the MRCEM Primary Exam. Dr Gebril has worked in hospitals across Sudan and the UAE and holds active medical licenses in both countries. He is the founder of the Sudanese Healthcare Organization, supporting communities affected by conflict, and the founder of Noon Academy, an online platform for medical education. Dr Gebril has presented at international conferences, including the African and European Emergency Medicine Congresses. Fluent in Arabic and proficient in English, he is committed to advancing emergency care, improving access to healthcare, and empowering medical professionals through education.



Dr Tagwa Saeed Ibrahim Badawe is a Senior Registrar of Internal Medicine with 12+ years of experience, including 4 years as an Academic Cooperative Lecturer at the University of Kordofan. A passionate advocate for sustainable healthcare in conflict-affected regions, she directs the Kordofan Breast Cancer Campaign and has spearheaded national awareness initiatives on breast/cervical cancer, sepsis, patient safety, and neglected tropical diseases. Her work bridges public health, medical education, and humanitarian action, notably through her volunteer role with the Khairazzad Humanitarian Organization. Dr Badawe champions health equity and capacity building, with a focus on Compassionomics, integrating empathy into systemic healthcare solutions. Her leadership in Sudan's under-served communities reflects a commitment to merging clinical excellence with grassroots development.