

Nursing Practice and Education in Yemen and Its Impact During War

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Nursing is the backbone of healthcare systems, playing a vital role in public health improvement. However, armed conflicts adversely affect this profession, particularly in education and practice. In Yemen, the ongoing conflict has led to the destruction of educational and healthcare institutions, impacting the training of nurses. A study revealed that Yemeni nurses' knowledge of Basic Life Support (BLS) was inadequate, with only 53.65% of correct responses indicating training gaps during the war. Practitioners also face challenges such as shortages of medical resources, power outages, and the migration of skilled medical personnel. Despite these difficulties, nurses in conflict zones have demonstrated resilience and adaptability, enhancing their clinical skills. This article highlights the impact of war on the nursing profession in Yemen, focusing on challenges in practice and education.

Introduction

The progress of societies is directly linked to advancements in education (Omer et al., 2024). Education is the backbone of any nation and is influenced by its socio-economic and political conditions (Muthanna et al., 2022). Medical and health education is one of the most significant branches of education that contributes to societal development. Studies have shown that medical and health education is crucial in enhancing social, cultural, and economic spheres (Takoutsing et al., 2023). Among the core components of the healthcare sector, nursing stands out as a fundamental pillar. A study proved that modern nursing arose coinciding with the Crimean War at the hands of Florence Nightingale (Bhardwaj, 2022). According to a 2020 report by the World Health Organization, there are over 27 million nurses worldwide, making nursing the largest profession in the medical field. Given the significant size of the nursing workforce, any national changes in healthcare policies or education systems will inevitably impact this profession, either positively or negatively. As a result of the wars in Syria and Iraq, studies have shown a significant impact on the nursing and medical sectors due to the conflict war (Bdaiwi et al., 2023) & (Barnett-Vanes et al., 2016). Given that the war in Yemen has also intensified for a period no less than that of the Iraq and Syria wars, nursing education and training have certainly been affected by this war, including the destruction of universities located in conflict zones, such as Al Hudaydah University, Hospitals and Healthcare center (Elnakib et al., 2021). In this context, this article will discuss the impact of the war on the nursing profession in terms of practice and education.

Challenges in nursing practice during the war in Yemen

Examining conflicts similar to those in Yemen, such as Sudan, reveals substantial challenges for medical science practice (Omer et al., 2024). According to a study conducted in Sudan, the war over the last three years has destroyed educational

institutions and their conversion into military barracks under military pressure. This significantly reduced the safe clinical training environment(Omer et al., 2024). Furthermore, studies reveal that developed countries have implemented simulation-based clinical training during the conflict, allowing students to complete their education despite unstable circumstances(Qayumi et al., 2024). However, Yemen has significant challenges in this area, such as a shortage of hospitals, power shortages, and the exodus of skilled medical workers overseas(Muthanna & Sang, 2018). Remote learning prospects are further complicated because internet connectivity is sometimes non-existent or too expensive(Gaber et al., 2022). An investigation assessing Yemeni nurses' knowledge of Basic Life Support (BLS) found that 46.35% of responses were incorrect, while 53.65% were correct. This suggests that recent graduates who completed their education during the war did not receive adequate instruction, highlighting an essential gap in training(Alkubati et al., 2022). Despite these difficulties, research has also revealed beneficial viewpoints from Iraqi nurses, who said that working in a conflict environment helped them become more resilient and have a wider range of clinical abilities(Goodman et al., 2013).

Impact of War on Nursing Education

In wars, the destruction of education begins, and it is the last thing that is corrected(Saleh, 2016). War in the Middle East, including Syria, Iraq, and Yemen, has had a profound impact on education(Muthanna et al., 2022). Because of Yemen's power dynamics, which divide authority between government and al-motion-controlled areas, assessing the country's educational system is now very difficult(Gaber et al., 2022). The Yemeni Minister of Higher Education of the legitimate government, Khaled Al-Wasabi, said in an interview on October 23, 2022, that major universities such as the University of Hadramaut, the University of Aden, the University of Taiz and the University of Hodeidah were negatively affected by the displacement of faculty members due to the war and financial restrictions(Website, n.d.). It concerns how war affects education generally(Saleh, 2016) and healthcare education specifically(Saleh, 2016) and (Takoutsing et al., 2023). Conflicts and war either halt education or, if they continue, have terrible results(Muthanna et al., 2022), particularly in the medical disciplines(Takoutsing et al., 2023). Medical and health professions rely heavily on continuous training and access to updated resources, both of which have been disrupted by ongoing conflicts(Takoutsing et al., 2023). For example, research in Iraq found that limited access to medical textbooks significantly affected health education. Similarly, blockades and restrictions in Yemen have had a comparable effect(Barnett-Vanes et al., 2016).

Conclusions

In conclusion, nursing education and clinical practice have suffered dramatically due to the Yemeni conflict. Several factors, including the devastation of educational institutions, the loss of teachers, a shortage of medical resources, and inadequate infrastructure, have harmed the nursing profession. Despite the resilience of healthcare professionals, the ongoing challenges indicate an urgent need for policy interventions to restore nursing education and healthcare services. Addressing these issues will be crucial in rebuilding Yemen's healthcare system in the post-war period. We also advise studies to find precise statistics on how war has impacted nursing, as we have not yet been able to evaluate the state of nursing education and practice because of a lack of literature review.

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References

- Alkubati, S. A., McClean, C., Yu, R., Albagawi, B., Alsaqri, S. H., & Alsabri, M. (2022). Basic life support knowledge in a war-torn country: a survey of nurses in Yemen. *BMC Nursing*, 21(1), 1–13. <https://doi.org/10.1186/s12912-022-00923-0>
- Barnett-Vanes, A., Hassounah, S., Shawki, M., Ismail, O. A., Fung, C., Kedia, T., Rawaf, S., & Majeed, A. (2016). Impact of conflict on medical education: A cross-sectional survey of students and institutions in Iraq. *BMJ Open*, 6(2). <https://doi.org/10.1136/bmjopen-2015-010460>
- Bdaiwi, Y., Sabouni, A., Patel, P., Ekzayez, A., Alchalati, S., Abdrabbuh, O., Abbara, A., & Glogowska, M. (2023). Impact of armed conflict on health professionals' education and training in Syria: a systematic review. *BMJ Open*, 13(7), 1–10. <https://doi.org/10.1136/bmjopen-2022-064851>
- Bhardwaj, R. S. (2022). *Nursing in the War crisis: A narrative review*. 9(2), 1–4. <https://doi.org/10.5281/zenodo.8171819>
- Elnakib, S., Elaraby, S., Othman, F., BaSaleem, H., Abdulghani AlShawafi, N. A., Saleh Al-Gawfi, I. A., Shafique, F., Al-Kubati, E., Rafique, N., & Tappis, H. (2021). Providing care under extreme adversity: The impact of the Yemen conflict on the personal and professional lives of health workers. *Social Science and Medicine*, 272(February), 113751. <https://doi.org/10.1016/j.socscimed.2021.113751>
- Gaber, Y. A., Al-Sanabani, R., Annuzaili, D. A., Al-Danakh, A., & Ling, L. C. (2022). Research progress of health care in Yemeni children during the war: Review. *Primary Health Care Research and Development*, 23. <https://doi.org/10.1017/S1463423622000421>
- Goodman, P., Edge, B., Agazio, J., & Prue-Owens, K. (2013). Military nursing care of Iraqi patients. *Military Medicine*, 178(9), 1010–1015. <https://doi.org/10.7205/MILMED-D-13-00055>
- Muthanna, A., Almahfali, M., & Haider, A. (2022). The Interaction of War Impacts on Education: Experiences of School Teachers and Leaders. *Education Sciences*, 12(10). <https://doi.org/10.3390/educsci12100719>
- Muthanna, A., & Sang, G. (2018). Brain drain in higher education: Critical voices on teacher education in Yemen. *London Review of Education*, 16(2), 296–307. <https://doi.org/10.18546/LRE.16.2.09>
- Omer, A. T., Ali, E. M., Elhassan, M. E., Ibrahim, S. A., & Ahmed, Y. S. (2024). Medical education challenges during the war crisis in Sudan: a cross-sectional study, 2023–2024. *BMC Medical Education*, 24(1). <https://doi.org/10.1186/s12909-024-06358-2>
- Qayumi, K., Masoumian Hosseini, S. T., Masoumian Hosseini, M., Nejat, A., Salih, M., Azimi, M., Forqani, S., Akbar, B., Farooq, G., Shafaq, N., Rustampoor, H., Oryakhil, N., Rahmani, M., Noora, M., Jallah, M. N., Naebkhil, A., Zhwak, Z. A., Aziz, S., Omar, F. A., ... Ferreres, A. (2024). Enhancing medical training in conflict zones and remote areas through innovation: introducing the Canadian Virtual Medical University Initiative. *EClinicalMedicine*, 76, 102854. <https://doi.org/10.1016/j.eclinm.2024.102854>
- Saleh, A. A. K. (2016). The Impact of War on the Right to Education in Yemen. *Human Rights Perspective*. 1–23.
- Takoutsing, B. D., Gāman, M.-A., Puyana, J. C., & Bonilla-Escobar, F. J. (2023). The Silent Casualties: War's Impact on Medical Students and Medical Education. *International Journal of Medical Students*, 11(4), 254–258. <https://doi.org/10.5195/ijms.2023.2476>
- Website, A.-F. M. (n.d.). فارغة شبه جامعات 3 والخاصة الحكومية بالجامعات الدراسية، الحرب أثر. Retrieved October 23, 2022, from <https://www.al-fanarmedia.org/ar/#:~:>