



Commentary on the impact of early exposure and mentorship on the neurosurgery career aspirations of medical students in LMICs

Ruth Wanjiku Mwangi, Kelvin Samuria Sokoto, Bartay Matui*

Neurosurgery is a lifesaving intervention for people with serious brain and spinal disorders; however, access to neurosurgical care in low- and middle-income countries (LMICs) is limited due to the low number of neurosurgeons. This article gives an in-depth analysis of how early exposure to neurosurgery and mentorship play a role in influencing medical students' career paths in LMICs. One of the strengths of this paper is the exploration of an important topic relevant to the development of neurosurgery in LMIC and the availability of adequate studies for a standard literature review. However, the paper has limitations such as financial constraints to access databases and excluding non-English articles^[1].

The article does a good job of drawing attention to the challenges faced by the neurosurgery personnel in LMICs. These include a scarcity of trained professionals, brain drain, and inequalities in training opportunities^[2,3]. Furthermore, poor remuneration and inadequate facilities hamper the retention of skilled neurosurgical personnel^[4]. It also adds that infrastructural development, providing more training opportunities and effecting competitive remuneration are vital in bolstering the neurosurgery workforce in LMICs.

The article primarily focuses on how early neurosurgical exposure bridges the neurosurgical knowledge gap by providing the technical skills required in clinical setups through global outreach programs and collaborations between high-income countries and LMIC^[5]. Mentorship offers insightful critiques and guidance; hence, mentees have the necessary skills to navigate their careers. The authors suggest strengthening neurosurgery exposure in medical education through initiatives such as electives and incorporating mentorship into career development strategies to equip future neurosurgeons^[6].

Despite the advantages that result from mentorship and early neurosurgical exposure, the paper also highlights drawbacks such as the high cost of the program, duration of the program, fear of

work-life balance, cultural influences, and personality traits that may influence motivation for pursuing neurosurgery^[7].

The analysis of this article would applaud its comprehensive investigations of the challenges and recommendations given to create a long-term neurological workforce in LMIC. However, it mostly focuses on the benefits of exposure and mentorship from an academic and professional perspective. Understanding the sociocultural and personal challenges that student's face may give a better perception of difficulties in this field.

Ethical approval

Not applicable.

Consent

Not applicable.

Sources of funding

None.

Authors Contribution

Conceptualization: R.W.M., B.M.; writing – original draft: R. W.M., K.S.S.; writing – review and editing: B.M.

Conflicts of interest disclosure

None.

Research registration unique identifying number (UIN)

Not applicable.

Guarantor

Bartay Matui.

Provenance and peer review

Not commissioned, externally peer-reviewed.

Assistance with the study

None.

Moi University School of Medicine, Eldoret, Kenya

Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.

*Corresponding author. Address: Moi university school of medicine, Eldoret, 30100 Uasin Gishu, Kenya. E-mail: bartaymatui@gmail.com.

Copyright © 2025 The Author(s). Published by Wolters Kluwer Health, Inc. This is an open access article distributed under the Creative Commons Attribution-ShareAlike License 4.0, which allows others to remix, tweak, and build upon the work, even for commercial purposes, as long as the author is credited and the new creations are licensed under the identical terms.

Annals of Medicine & Surgery (2025) 87:428–429

Received 8 October 2024; Accepted 20 November 2024

Published online 9 January 2025

<http://dx.doi.org/10.1097/MS9.0000000000002806>

Acknowledgements

Not applicable.

References

- [1] Kuol PP, Mabwi WN, Muili AO, *et al.* Exploring the impact of early exposure and mentorship on the neurosurgery career aspirations of medical students in low- and middle-income countries. *Ann Med Surg (Lond)* 2024;86:5370–76.
- [2] Cheng S. Barriers to accessing congenital heart surgery in low- and middle-income countries: a systematic review. *World J Pediatr Congenit Heart Surg* 2023;15:94–103.
- [3] Saluja S, Rudolfson N, Massenburg B, *et al.* The impact of physician migration on mortality in low and middle-income countries: an economic modelling study. *BMJ Glob Health* 2020;5:e001535.
- [4] Haglund M, Fuller A. Global neurosurgery: innovators, strategies, and the way forward. *J Neurosurg* 2019;131:993–99.
- [5] Akhigbe T, Zolnourian A, Bulters D. Mentoring models in neurosurgical training: review of literature. *J Clin Neurosci* 2017;45:40–43.
- [6] Duy PQ, Negoita S, Mahajan UV, *et al.* Description and assessment of a neurosurgery shadowing and research program: a paradigm for early and sustained exposure to academic neurosurgery. *Transl Neurosci* 2019;10:195–99.
- [7] Dada OE, Karekezi C, Mbangtang CB, *et al.* State of neurosurgical education in Africa: a narrative review. *World Neurosurg* 2021;151:172–81.