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## Can the Early Introduction of Surgical Workshops into a Medical Curriculum Help Tackle the Under-Representation of Females in Surgical Specialties?

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Dear Editor,

I read with great interest the article “Innovative Surgical Workshops Targeting Undergraduate, Premedical, and Medical Students” published by Gilman and Kraszpuska (2022) who introduced 4 week-long surgical workshops into the curriculum of undergraduate pre-medical and first year medical students [1]. The authors reported that based on their survey’s results, the workshops enhanced the students’ learning and interest toward surgical specialties as well. Key information about the number of female students that attended these workshops was omitted. Notably, in the past, male medical students significantly outnumbered their female counterparts as by the 1960s, female medical students accounted for only 25% of incoming medical students in the United States [2]. Nowadays, the rise in the number of female medical students in well developed countries is indeed remarkable as they now account for more than 50% of the incoming medical students [3-5]. Despite this significant steep increase in the number of female medical students in specific countries, the number of female medical practitioners in specific specialties including surgery, neurosurgery, and orthopedics is relatively low even in well developed countries. Clinical mentorship programs can be a useful tool in increasing a student’s interest toward specialties that are undersubscribed [6]. Therefore, it is important for medical institutions to establish appropriate mentorship programs that can be available to both female and male medical students during the pre-clinical years to expose female students to the appropriate female role models and undersubscribed specialties. As the under-representation of females in undersubscribed specialties is evident, part of a medical mentorship program could involve inviting female specialists and/or trainees to give a lecture to medical students about their experience in their specialty. This could be an effective way of increasing awareness toward specific specialties that are undersubscribed and helping students become exposed to different specialties at an early stage, giving them a chance to ask potential questions they may have and network as well. Subsequently, another component of a medical mentorship program could be female medical students shadowing female surgeon specialists, as by doing that they will gain first-hand experience in a specific field by experiencing the field’s environment and have an opinion on whether that environment could be suitable for them in the future based on their personal preferences. While experiencing the environment of a specific field may be beneficial, if a field’s environment is not inclusive it is possible that this could have a negative impact on students, eventually negatively influencing their specialty choice in the future. Having a positive mentorship experience can exert a great influence on which specialty a student will decide to choose [7]. Hence, a thorough implementation of specific strategies early in a medical curriculum can potentially help increase the female representation in surgical specialties by encouraging female medical students to pursue a career in a surgical specialty.

Compliance with Ethical Standards

Funding: NA

Conflict of Interest: The author declares that she has no conflict of interest.

Ethical approval: NA

Informed Consent: NA

**References:**

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3 [1] Gilman A, Kraszpuska B. Innovative Surgical Workshops Targeting Undergraduate, Premedical, and  
4 Medical Students. Med Sci Educ. 2022; <https://doi.org/10.1007/s40670-022-01590-1>  
5  
6 [2] Penny M, Jeffries R, Grant J, Davies SC. Women and academic medicine: a review of the evidence on  
7 female representation. J R Soc Med. 2014;107:259-263.  
8  
9 [3] Tyrrell L, Dauphinee D. 1999. Task force on physician supply in Canada. Canadian Medical Forum Task  
10 Force on Physician Supply in Canada. [http://www.physicianhr.ca/reports/Physician-SupplyinCanada-](http://www.physicianhr.ca/reports/Physician-SupplyinCanada-Final1999.pdf)  
11 [Final1999.pdf](http://www.physicianhr.ca/reports/Physician-SupplyinCanada-Final1999.pdf)>  
12  
13 [4] Boyle P. 2019. More women than men are enrolled in medical school. [online] AAMC. Available at:  
14 <<https://www.aamc.org/news-insights/more-women-men-are-enrolled-medical-school>> [Accessed 15 August  
15 2021].  
16  
17 [5] Van Heest A. Gender Diversity in Orthopedic Surgery: We All Know It's Lacking, but Why?. Iowa Ortho J.  
18 2020;40:1-4.  
19  
20 [6] Nimmons D, Giny S, Rosenthal J. Medical student mentoring programs: current insights. Adv Med Educ  
21 Pract. 2019;10:113-123.  
22  
23 [7] Kollias C, Banza L, Mkandawire N. Factors Involved in Selection of a Career in Surgery  
24 and Orthopedics for Medical Students in Malawi. Malawi Med J. 2010;22:20-23.  
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