Engaging Students from Conflict Regions in Orthopaedic Research: A Needs-Finding Study Informing a Global Access Initiative (GAI)

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Disclosures: none

INTRODUCTION: Students in conflict-affected settings face structural barriers to entering orthopaedic research pipelines (mentorship, skills training, visibility). Peer-reviewed work on health research capacity in LMICs highlights mentorship as a central enabler—directly relevant to conflict-affected contexts.[1,2] Recent consensus guidance for LMIC settings offers concrete mentorship practices and structures,[3] while evidence shows virtual/online research training and mentorship are feasible with appropriate design,[4] though connectivity inequalities remain a material constraint for live sessions.[5] Building on this evidence, the Global Access Initiative (GAI) was conceived by the author in 2025 to provide remote mentorship, modular training, and transparent access pathways. This late-breaking abstract reports trainee-level needs-finding to inform GAI design.

METHODS: Anonymous bilingual (Arabic/English) online survey; convenience sampling of trainees (medical and pre-medical) studying in Palestine or Lebanon. Recruitment via email. Eligibility: current enrollment and consent; no identifying data collected. Descriptive statistics (counts, percentages); no tests of inference. According to the institution's ethics policy, a complete IRB review is not necessary. Sample size: N=30. Sex: 15/30 female (50%), 15/30 male (50%).

RESULTS: The survey was filled out by thirty people (N=30). Major barriers were limited access to research mentorship (22/30, 73.3%), limited international visibility to mentors and projects (17/30, 56.7%), and connectivity constraints (20/30, 66.7%), suggesting that live supervision would be limited by low or variable bandwidth. A three-pillar GAI concept was informed by these signals: (1) Micromodules—brief, asynchronous units (such as question framing, ethics, and basic statistics) intended for low-bandwidth access; (2) Mentorship—remote matching with light-touch oversight; (3) Access & Visibility—transparent listings for projects that are suitable for remote work, co-authorship guidelines, and showcases for accepted abstracts/posters. The feasibility of low-bandwidth delivery and sufficient mentor availability across at least three time zones were confirmed by preliminary feasibility checks; a focused desk review discovered similar models, none of which were unique to orthopaedic trainees affected by conflicts.

DISCUSSION: To the best of our knowledge, the revised GAI framework provides a well-structured blueprint based on a methodical needs-analysis procedure. These data, which triangulate with LMIC mentorship literature and virtual training evidence, quantify what ORS members largely lacked at the trainee level in conflict-affected contexts: where mentorship access breaks down, how limited external visibility operates, and how connectivity barriers shape feasible supervision models. [1–5]

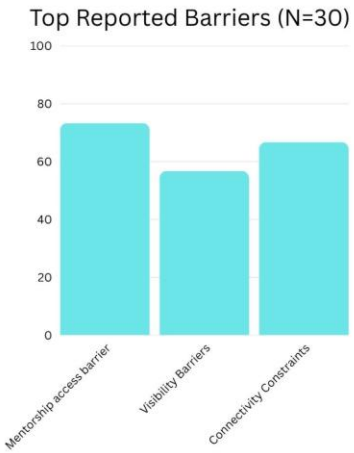
Our sample's connectivity limitations (20/30, 66.7%), mentorship access (22/30, 73.3%), and external visibility (17/30, 56.7%) all suggest an asynchronous-first, low-bandwidth design for equitable participation (e.g., recorded micro-modules, message-based feedback, audio-only check-ins, flexible cross-time zone scheduling). These data directly inform the selection of GAI pillars:

• Virtual mentorship accommodates time-zone and bandwidth limitations while addressing the prevalent access gap.
• Capacity-building micro-modules provide asynchronous, low-bandwidth skill training.
• The visibility barrier is addressed by access and visibility mechanisms (clear authorship pathways, transparent project listings).

Self-report, a small convenience sample (N=30), and possible selection bias are among the limitations; generalizability is constrained. However, given that this is a late-breaking needs-finding study, the descriptive signals are reliable enough to support a practical pilot and direct ORS members to high-leverage support (open project pipelines, low-bandwidth training materials, and remote mentorship).

SIGNIFICANCE: For trainees in conflict-affected settings, this needs-finding analysis offers practical, affordable recommendations for increasing equitable entry points into orthopaedic research. The most frequent obstacles are directly addressed by giving priority to asynchronous, low-bandwidth training and mentoring in conjunction with clear access/visibility channels. The findings help ORS develop portable micro-modules that are appropriate for variable connectivity, recruit mentors across time zones, and inform Education & Outreach programming. In order to create a template that can be used in other areas, a brief pilot will test the mentor-match rate, module completion, and scholarly output.

Late-breaking compliance: Data were gathered between September 22 and October 31, 2025.



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