



Evaluating international global health collaborations: Perspectives from surgery and anesthesia trainees in India

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Abstract

Aim: We sought to describe the perspectives of postgraduate, Indian trainees toward international collaborations and to discuss how these perceptions can be used to increase the positive impact of international collaborations for the host institution.

Methods: We conducted a descriptive, cross-sectional survey among anesthesia and surgery trainees at Sher - i - Kashmir Institute of Medical Sciences using a pretested, self-administered questionnaire. Data were summarized as means or medians where applicable; otherwise, descriptive statistical analyses were performed.

Results: of 43 eligible trainees, 77% completed the questionnaire. The majority (75%) agreed that visiting groups improve their training, mostly through skills workshops and specialist camps. A substantial portion of trainees reported that international groups had a neutral or negative impact on patient care (40%). Only 15% agreed that research projects conducted by international groups are in priority areas for India. Among those surveyed, 28% reported participation in these projects, but none has published as a coauthor. Nearly one-third of trainees (31%) reported discomfort with the ethics of some clinical decisions made by visiting faculty.

Conclusion: The current perspective from the surgery and anesthesia trainees of College of Health Sciences demonstrates rich ground for leveraging international collaborations to improve training, primarily through skills workshops, specialist camps, and more visiting faculty involvement. This survey also identified potential challenges in collaborative research and ethical dilemmas that warrant further examination.

Keywords: anesthesia, global health, India, surgery

Introduction

In recent years, the number of international academic global health programs has increased dramatically. In India, there are the sites of numerous long standing international health collaborations and the host to a multitude of international medical trainees, faculty, and global health groups each year. In resource-constrained countries, there is dire need for strategies to address the critical shortage of health care workers and the growing burden of disease, including operative diseases [1].

Advocacy to increase medical training has led to expansion of existing programs and creation of new efforts including many focused on surgery and anesthesia. However, many of the training programs have significant skills, knowledge, and technical gaps that could potentially be addressed through collaboration with international partner institutions [2-5].

The scope of international collaborations includes trainee and faculty exchanges, skills workshops, lectures, conferences, mentorship, research training, collaborative research, specialized program funding and development, scholarships, clinical service, education, and equipment or supply donation programs [5]. Although the benefits, both educational and personal, of such programs to visiting trainees and faculty have been well documented through satisfaction surveys, publications, grants, and career

development assessments, the tangible benefits to host institutions in resource-limited settings have not been well evaluated or reported [6-9].

Recent work has highlighted the strategic importance of trainees and their perspectives in operative collaborations [10] and in planning for operative training elsewhere in the region [11]. Evaluating the impact of international academic global health projects on host institutions is critically needed for both international and locally driven capacity building initiatives. To our knowledge, no previous authors have specifically assessed the perspectives of local trainees toward international, visiting collaborators in a resource-constrained environment.

Methodology

Following ethical approval from the Sher - i - Kashmir Institute of Medical Sciences, India Institutional Review Board, this descriptive, cross-sectional survey was conducted among postgraduate trainees in anesthesia and surgery in August 2019.

Content validity of the survey was established through the use of expert panel reviews and focus groups. After initial pilot testing with a sample of trainees, surveys were refined by clarifying wording and re-piloting. All second- and third-year trainees were invited by their respective department chairs to participate in the voluntary survey. First-year

trainees were not asked to participate given their limited clinical exposure at the time of study. Once informed consent was obtained, the survey was administered in hard copy by the departmental offices.

For the purpose of the survey, skills transfer workshops were defined as specialized training sessions whereby specific skills and competencies are taught through didactics and hands-on practice using simulated clinical scenarios. Examples of workshops include essential surgical skills, trauma management, hand surgery, and flap construction courses. Specialist camps are defined as dedicated, hands-on sessions lasting days to weeks, where specialists instruct trainees on particular clinical skills using patients in the clinical setting.

Data management and analysis

Survey data were manually entered (in duplication) and validated using Epi Data Entry 3.1 (The EpiData Association, Odense, Denmark, 2008). Data analysis was performed with EpiData Analysis Software (The EpiData Association). Continuous data were summarized as means or medians where applicable; otherwise, descriptive statistical analyses were undertaken.

Results

Of the 43 eligible surgery and anesthesia trainees, 33 (77%) completed the questionnaire (20 surgical trainees and 13 anesthesia trainees). The age range of respondents was 25–37 years, with a mean of 31 years (Table I). The majority of the respondents were male (71%), and 48% were married. The modal number of dependents was two. The majority of survey respondents (81%) reported receiving a scholarship, and of these scholarships, 42% were provided by international sources. All scholarships reported covered tuition fees, with 46% also covering living expenses and 35% also covering research fees. Approximately two-thirds of the trainees (67%) were housed through hospital-provided accommodations. When surveyed on the utility of various functions of visiting international collaborations (Skills workshops, specialist camps, access to educational resources, scholarships, or additional support on the ward), survey respondents ranked skills transfer workshops and specialist camps as the most useful (Table II).

Table 1: Demographics of Masters in Medicine survey respondents

Variables	n	%
Department		
Surgery	20	61
Anesthesia	13	39
Age, mean years		
Female	9	29
Marital Status		
Married	16	48
Single	17	52
Number of dependents (mode)		
Funding source, n = 32		
Self	6	19
International scholarship	11	34
Domestic scholarship	15	47
Scholarship Coverage		
Tuition	26	100
Living expenses	12	46
Research fees	9	35

Table 2: Ranking of usefulness of various activities of visiting faculty, trainees, and groups

Activity	Rank					No of responses	Median	IQR
	1	2	3	4	5			
Specialist camps	7	12	11	7	1	28	2	3
Skills workshop	15	5	5	1	1	29	1	2
Scholarships	11	1	5	5	6	28	3	3
Increased access to educational resources	1	8	7	6	5	27	3	2
Additional Support on wards and operating rooms	2	0	7	5	14	28	4	2

Discussion

Numerous studies have consistently found “positive impacts” on visiting, international participants in global health experiences, although the benefits for trainees and faculty at host institutions in resource-constrained environments have not adequately been examined [7]. To our knowledge, no previous authors have formally assessed perspectives of local trainees in a resource-limited environment toward international collaborations, leaving a critical gap in the literature on effective models for global health collaborations.

Through the use of a cross-sectional survey, we assessed postgraduate operative and anesthesia trainee perceptions and experiences working with international collaborating groups. The results are discussed by survey subsection (to follow) before final conclusions are made.

The majority of trainees surveyed reported that visiting collaborators improve their training experience, although respondents reported this to be the case more often for visiting faculty than visiting trainees (78% vs 63%). This finding was expected as visiting faculty, by virtue of their seniority, will potentially have more knowledge to impart. Furthermore, visiting faculty usually conduct the skills workshops and specialists camps, which the trainees ranked as the most useful functions of international collaborations.

This finding highlights the importance of active faculty participation in the growing number of international medical initiatives that seek to provide maximal benefits to host institutions [6, 8, 9, 12-14]. Given the challenge of securing protected time for faculty wishing to pursue academic global health endeavors, the results presented here should be used to urge academic institutions to pay closer attention to the needs of partnering institutions and do more to provide faculty, not just trainees, with support to participate in international medical collaborations. These findings may reflect unilateral planning of projects and pursuit of studies dictated by international calls for funding, rather than collaborative study design. Although we report that 28% of the trainees have participated in collaborative research, we do not characterize this participation and thus cannot make definitive conclusions as to why no one has published a paper as a result of such efforts. Previous work has identified similar challenges in collaborative research, with a number of “pitfalls” cited in collaborative global research [15-18]. Most of this work has focused on collaborations in infectious disease research. The majority (81%) of trainees are supported through scholarships, 42% of which come from international collaborating partners. Despite high use, scholarships ranked only third when we assessed for the most useful functions of international collaborations, behind skills workshops and specialists camps. Financial Sponsorship may have ranked lower than hypothesized

because scholarships are relatively more abundant than other activities surveyed. This finding is in stark contrast to the recent past when scholarships in surgery and anesthesia were relatively few as compared to other medical fields. Lack of scholarships was previously identified as a significant barrier for medical students considering a career in surgery or anesthesia [2].

This study has several limitations. The survey tool was administered to trainees and did not include faculty or other individuals or groups who may be stakeholders in international collaborations. Therefore, any inferences made shall be limited to the perspectives of those trainees. Also, this study was an assessment of opinion. No measure of feasibility, sustainability or cost effectiveness of international collaborations was made, and thus no comments can be made in those areas.

In conclusion, this survey is the first to report perspectives of trainees from a resource-constrained environment towards international collaborations in surgery and anesthesia. Here we find that the majority of trainees believe that international collaborations improve their training experience, especially through visiting faculty, skills workshops and specialist camps. According to trainees, current collaborative research is not in high priority areas and has low trainee co-authorship. The perspective of trainees in resource-limited environments is a critical and often overlooked aspect of global health collaborations and should be given greater priority in setting guidelines, establishing programs, and measuring impact and effectiveness.

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