



Community based medical education: A learning experience of Pakistani Undergraduate Medical Students at Medical Camps.

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Article received on:

20/10/2020

Accepted for publication:

12/02/2021

INTRODUCTION

Medical camps provide a unique, time intensive and community driven learning environment, which can be utilized by healthcare trainees to gain valuable clinical experience.¹ These camps have already been shown to promote learning among nursing students², pharmacy students³ as well as pharmacy residents.⁴ Medical specialty camps provide a learning environment not only for healthcare professionals (HCPs) but for patients as well, who obtain more competent knowledge about their disease process.⁵

Community oriented medical education (COME) has become the new hallmark for learning, with curricula for various specialties being developed in line with community needs and problems. In Pakistan, researchers have shown that medical students are dissatisfied with the current knowledge and skills they acquire regarding community based problems. This,

ABSTRACT... Objective: To determine impact of community based Medical Education on learning of undergraduate medical students. **Study Design:** Non-comparative, Prospective study. **Setting:** Irfania Ophthalmic Medical Camp, Lahore. **Period:** July 2019. **Material & Methods:** 70 students participated in a 4 hour interactive session, where they took a focused history, performed relevant clinical examination, and counseled patients regarding their disease. At the end, feedback was collected using a pre-tested questionnaire. Data obtained was analyzed using SPSS version 23, with mean \pm SD determined for continuous variables and frequency with percentage for categorical variables. **Results:** Majority of the participants were female fourth year medical students. 97.1% found the camp system more efficient for learning, while 94.3% thought it should be included in future ophthalmic curricula. 81.5% of the participants were of the opinion that the camp had had a positive impact on their communication skills regarding taking focused history and counseling patients. **Conclusion:** In a country like Pakistan with a high burden of ophthalmic diseases and a developing medical curriculum, medical camps are essential for training and skill learning for undergraduate medical students, and should be included in the medical curriculum.

Key words: Community Education, Medical Education, Medical Camps, Ophthalmology.

Article Citation: Kamal Z, Ali MM, Ali MZ, Rustam MN, Khan SZ. Community based medical education: A learning experience of Pakistani Undergraduate Medical Students at Medical Camps. Professional Med J 2021; 28(12):1857-1861. <https://doi.org/10.29309/TPMJ/2021.28.12.6165>

in turn, is a deterrent against the provision of effective healthcare.⁶ While some institutes have only introduced community based learning in their curricula,^{7,8} others have developed and implemented community health programs, with the perspective that effective medical training can be achieved by direct exposure to the community health environment.⁹ In lower and lower middle income countries, such as Pakistan, there is a lack of doctors and resources against a foray of high patient burden. Medical camps not only serve as a learning point, but also sometimes as the only accessible means of healthcare provision in some remote areas.

In ophthalmology the burden of disease in Pakistan is on the rise, with almost 4.3% of the total population suffering from visual loss, ranging from moderate loss to complete blindness.¹⁰ Cataract is the most common cause of moderate and severe visual loss, contributing to >50% of these cases.

When compared against the total available number of ophthalmologists, there are only around 2000 ophthalmologists in Pakistan, more than 70% of whom reside in urban areas, with a staggering work ratio of 11 ophthalmologists per million.¹¹ Therefore, the current resources are extremely sparse to cater to the growing ophthalmic needs of the population. In this context, ophthalmic medical education, especially COME, becomes more important, as it achieves the status of a cornerstone in improvement of eye healthcare. Since the proportion of general physicians to population is slightly better, at 8.1 physicians for 10,000 people, these practitioners, if adequately trained, can share and lessen specialist burden for common ophthalmic diseases.¹¹ Due to these reasons, ophthalmic community based medical education (CBME) through medical camps is potentially an important source for training medical undergraduate students and other HCPs in gaining insight of eye disorders in the community.

This study was conducted to determine the quantitative impact of CBME on ophthalmic learning. The objective was to determine the acceptance and feasibility of implementing community based ophthalmic education, as well as to improve learning of undergraduate students regarding eye disorders. Since most medical institutes are typically associated with tertiary care hospitals, medical students seldom encounter patients at initial disease stages, and are generally not directly exposed to the community health environment. The aim of this study was to understand how CBME can lead to new models of ophthalmic education that can eventually be integrated in the undergraduate medical curriculum.

MATERIAL & METHODS

A non-comparative, prospective study was conducted at Irfania Ophthalmic Medical Camp, a service arranged by a non-profit organization AI-Akhyar foundation on the outskirts of Lahore, the capital city of Punjab, in July 2019. 70 student volunteers from the International Federation of Medical Students' Associations (IFMSA) participated in the study. The study was approved

from the institutional review board of King Edward Medical University, Lahore. A four hour interactive session was held on the site of the camp, where students were asked to take a focused history, perform relevant clinical examination, and counsel patients regarding their disease. During the session students freely interacted with specialist ophthalmic educators from various institutes, who answered their patient related queries, demonstrated clinical signs, reviewed common ophthalmic medications used in the outpatient setting and guided patient counseling by the students. At the end, a feedback session was conducted, where pre-tested questionnaires were distributed to the student volunteers. Informed consent regarding participation in the research was taken from all the students as well as the patients attending the camp. One section of the questionnaire was designed with simple 'yes/no' questions regarding impact of CBME on learning as well as student satisfaction. A five point Likert scale was used to determine the overall experience, impact on communication skills, as well as the feasibility of the project. Data obtained was analyzed using SPSS version 23, with Mean \pm SD determined for continuous variables and frequency with percentage for categorical variables.

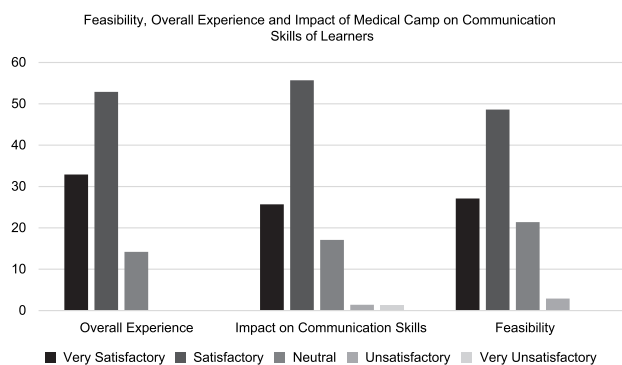
RESULTS

53 of the participants (75.7%) were female, with the majority (75.8%) from King Edward Medical University. 82% of the participants were fourth year medical students, who have a summative assessment in ophthalmology. The responses of the participants regarding the impact of the camp on their learning experiences are summarized in Table-I.

32.9% of the participants rated their overall experience as very satisfactory, while 53% reported it as satisfactory. 75.7% of the participants thought that the project was feasible in terms of the site of the medical camp, distance of the camp from the medical institutes, patient care and patient driven learning experience at the camp.

Question	Response as 'Yes' (from 70 participants)
Is the camp based setting more efficient for learning in your opinion?	68 (97.1%)
Is the camp based setting more interesting for learning in your opinion?	69 (98.5%)
Do you think this setting encourages greater student participation?	68 (97.1%)
Do you think you were better able to observe the disease process and its management?	64 (91.4%)
Do you think this should be a part of the ophthalmic curriculum?	66 (94.3%)
Are you satisfied with this project?	67 (95.7%)
Would you like to attend such a project again?	69 (98.5%)

81.5% of the participants were of the opinion that the camp had had a positive impact on their communication skills regarding taking focused history and counseling patients.



DISCUSSION

Our study is the first study on impact of CMBE in ophthalmic learning of undergraduate medical students. We report results from student volunteers at an ophthalmic medical camp in Lahore. Our study shows a gender predilection, with male predominance. 82% of the participants were fourth year medical students, who have to appear in an annual written and practical assessment in Ophthalmology. There were low rates of participation from other years, especially final year medical students, whose prior experience in ophthalmology would have been beneficial in increasing the overall impact of learning.

There is a high reported rate in our study of student satisfaction, increased efficiency and interest in learning ophthalmology, as well as better student participation. Medical students reported that they were better able to understand the disease process and its initial management by working directly in the community health environment. This has been previously reported by community

health programs in other countries as well.^{1,9} An overwhelming majority of the students felt that such outreach programs should be a part of their medical curriculum, since the learning attained at these camps can be better applied to clinical practice at their tertiary care hospital.

The feasibility of medical camps for medical teaching is a hitherto unexplored topic in literature. While studies have encouraged the participation of ophthalmology residents in these camps^{12,13}, little to no research has been carried out on the learning outcomes of undergraduate students at medical camps. Undergraduate medical education is an ever-changing landscape however, current curricula pose a risk of producing graduates deficient in clinical expertise and patient management.¹⁴ Our study reports a high feasibility of such camps in promoting learning among students further studies still, however, need to be undertaken in this regard.

In Pakistan, communication skills are grossly deficient among medical professionals, with one study reporting that only 5% of residents had received formal training in communication during their undergraduate years.¹⁵ While undergraduates have a positive attitude towards learning communication skills, this declines with seniority in education, as a more apathetic approach develops.¹⁶ Our study reports that 81.5% of the participants felt their skills in taking focused history and counseling patients regarding disease improved by participation in a medical camp. Therefore, such camps can be integrated in the current model of medical education to improve communication skills as well.

Our study has a few limitations. There were a

limited number of participants, with predominance of fourth year medical students who have a summative assessment in ophthalmology. Student participation was also restricted to a few institutes, and equal representation of public and private medical students was not present. Simultaneous feedback from teaching faculty would have helped improve the impact of our study on changing of curriculum.

CONCLUSION






In a lower middle income country like Pakistan with a high burden of ophthalmic disease, proper training of medical students and other healthcare professionals is vital for distributing the patient load. Medical camps provide an excellent initiative for learning of undergraduate students in a community oriented setting. These camps can help improve disease understanding, communication skills, and better clinical practice of medical students. Therefore, curricular activities should be enacted on an institutional level for participation of medical students in these camps. This will provide a much needed change in the landscape of medical education, and will promote community based medical education in Pakistan, ultimately impacting the lives of both patients and doctors positively.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
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2	M. Mohsin Ali	Literature review, Data collection, Data analysis, Manuscript writing, Editing and review.	 <small>Manaqqibb</small>
3	Manaqqibb Zain Ali	Conception, study design, literature review, manuscript writing.	 <small>Rustam</small>
4	M. Naeem Rustam	Data collection, data analysis, manuscript writing, editing and review.	 <small>Saeed Zafar</small>
5	Saeed Zafar Khan	Data collection, data analysis, manuscript writing, editing and review.	