

## Research Article

# Bridging the gap in public health education in India: the need of the hour

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## ABSTRACT

**Background:** Lack of proper communication skills among budding doctors is considered to be a major gap existing between teaching and practice of public health in various parts of India. Therefore a competency based teaching curriculum is needed to sharpen these skills necessary for bridging this gap and achieving a successful community based medical education.

**Methods:** This cross-sectional study was conducted among a group of 28 students from a batch of 133 students in their fourth semester of second year undergraduate medical education, who attended their posting in the department of community medicine at JSS medical college (JSS University) in Mysore, for a period of one month during May 2014. A new educational intervention namely student's short seminar was included in addition to their routine community medicine teaching curriculum. At the end of the postings a feedback regarding the intervention was collected from the students using a pretested structured questionnaire.

**Results:** Questions related to the intervention were rated by the students in a six point Likert scale. The median total score was 15.0 (12-17). Among 28 students majority 16 (57.1%) of them had graded it as good while 11 (39.3%) had graded it as fair and 1 (3.6%) of them had graded it as poor based on the median total score.

**Conclusion:** Community based medical education can fulfil its purpose when it can advocate not only the cognitive domain (Knowledge) but also the affective domain (Attitudes) and psychomotor domain (Skills) of the learning process. Hence it is the foremost duty of the faculties in the department of community medicine in medical colleges to inculcate interest towards public health by introducing innovative and interactive teaching and learning interventions.

**Keywords:** Public health education, Medical students, Communication skills, Community

## INTRODUCTION

Origin of community medicine in India can be traced back to 1946. Health survey and development committee (Bhore Committee) report recommended a three month compulsory training for physicians in preventive and social medicine.<sup>1</sup> Community Medicine departments in Medical Colleges of India have ever since played an important role in imparting public health education at the undergraduate and postgraduate level including preventive, promotive and curative aspects in its

curriculum.<sup>2,3</sup> In this era of globally occurring information revolution, communication and leadership skills are among the most essential skills which are needed to be acquired by our medical graduates. The medical education system in India would collapse if the curriculum is outdated, insensitive to any modern process of teaching-learning concepts, rigid and discourages innovation.<sup>4</sup> There is a dire need for improving the quantity as well as quality of public health practitioners in order to strengthen the health care delivery system in India. The most important question that has to be

answered is, 'are the medical colleges and the Indian medical education system has evolved to produce doctors competent enough to handle the current public health challenges put forth by the community?' Hence community based medical education which is practice based and not completely theory based is the need of the hour.<sup>5</sup>

Lack of proper communication skills among budding doctors is considered to be a major gap existing between teaching and practice of public health in various parts of India. Therefore a competency based teaching curriculum is needed to sharpen these skills necessary for bridging this gap and achieving a successful community based medical education. With this background an innovative educational intervention in public health education was conducted among a group of medical undergraduate students at the department of community medicine, JSS medical college, JSS University (Deemed), Mysore city, Karnataka, Southern India with the following objectives:

1. To assess the perception of the students on improvement of their knowledge and communication skills in public health following the introduction of student's short seminar.
2. To assess the perception of the students on practical application of this intervention towards public health.

## METHODS

This cross-sectional study was conducted among a group of 28 students from a batch of 133 students in their fourth semester of second year undergraduate medical education, who attended their posting in the department of community medicine at JSS medical college (JSS University) in Mysore, for a period of one month during May 2014. Ethical clearance was obtained from the institutions ethics committee. Apart from the routine lectures on public health to the students by the faculties, Family Health Advisory Survey (FHAS) and field visits to places of public health importance, a new educational intervention namely student's short seminar was included in their community medicine teaching curriculum. Each student was assigned a topic related to public health and asked to present a short seminar for ten minutes upon it using MS office PowerPoint, following which an interactive two-way discussion was done between the students and the faculty in-charge. This was followed by a routine Family Health Advisory Survey (FHAS) in a specified village under the field practice area of JSS medical college, where each student interviewed five families for data related to socio-demographic factors, sanitation, nutrition, morbidity and mortality of the family members. Finally they imparted health education to the family members related to health and various socio-cultural factors related to occurrence of diseases.

At the end of the postings a feedback regarding the student's short seminar introduced into the community

health teaching curriculum was collected from the students (excluding their personal details in order to avoid reporting bias) using a pretested structured questionnaire consisting of 4 items. Response for each question was rated by a 6 point Likert scale so that the minimum score for each question would be 0 and the maximum score being 5, where 0 = Very poor; 1 = Poor; 2 = Average; 3 = Good; 4 = Very good; 5 = Excellent. Therefore the total score would range from 0 to 20. Questions were related to content of the presentations, context of the presentations, knowledge and skills gained through the presentations, practical application of this knowledge and skills towards community health. Data collected was entered in MS office excel sheet and analyzed using Statistical Package for Social Sciences (SPSS) software version 22.0.

## RESULTS

The total score of 20 was categorized into good (15-20), average (10-14) and poor (<10). Among 28 students majority 16 (57.1%) of them had graded the innovative intervention of the student's short seminar presentations as good while 11 (39.3%) had graded it as fair and 1 (3.6%) of them had graded it as poor. As shown in Table 1, median total score (Q<sub>1</sub> - Q<sub>3</sub>) was 15.0 (12-17).

Content of the presentations were focused on public health like social pathology, social security, poverty and health, primary health care services, health communication etc. [Median Score = 3.0 (3-4)] the context of the presentations were found to be more relevant to the community based medical education [Median Score = 4.0 (3-4)]. Students found that the Knowledge and the skills of communication gained through these presentations were of immense use [(Median Score = 4.0 (3-4)] and this knowledge and skills gained were found to have sensitized the students for practical application during the Family Health Advisory Survey (FHAS) which followed these presentations [(Median Score = 4.0 (3-5)]. On the whole this innovative and interactive educational intervention received a warm reception among medical students [(Median Score = 15.0 (12-17)]. Hence it was found to be a practically applicable tool and thereby bridges the gap in the existing public health education effectively delivering the knowledge from classroom to the community.

**Table 1: Median scores of criteria of the student's short seminar presentations.**

| Criteria of the student's short seminar presentations                       | Median Score (Q <sub>1</sub> - Q <sub>3</sub> ) |
|---|---|
| Content of the presentations  | 3.0 (3-4)                                       |
| Context of the presentations  | 4.0 (3-4)                                       |
| Knowledge and skills gained through the presentations                       | 4.0 (3-4)                                       |
| Practical application of this knowledge and skills towards community health | 4.0 (3-5)                                       |
| <b>Total score</b>  | <b>15.0 (12-17)</b>                             |

## DISCUSSION

Community medicine departments play a crucial role in shaping the future of public health education in India which parallels public health challenges emerging in the country.<sup>3</sup> According to Anita N et al. teaching community medicine with orientation towards examination alone could not solve the problem of mismatch between teaching and practice of community medicine which leads to the need for change in the teaching methodology. Teaching community medicine traditionally by didactic lectures, few family visits and practical sessions had failed to stimulate a sense of curiosity and eagerness for learning as it barely simulated real-world situation. Relocating the standards of teaching from the classroom to the community would provide a realistic picture to the subject thereby stimulating learning and implementation.<sup>6</sup> Thus community based medical education addressing the changing health needs of the community as well as epidemiological and demographic transitions of the country had been introduced into the curriculum of community medicine in various medical colleges throughout the country.

Though community based medical education is being practiced in many medical colleges throughout the country, the question that arises at this point of time is whether this intervention is being effectively practiced to meet its objectives. Dongre AR et al. had opined that early exposure of medical undergraduates to community based survey research process can develop them into better clinicians, who are able to understand and use the field level data.<sup>7</sup>

As per Mudey A et al. the community based medical education sensitized the students on the influence of political, economical and environmental factors upon health and disease. Similar to our study they found that it had improved the student's communication skills. Student also felt it to be useful in knowing various health education activities and primary health care services at village level.<sup>8</sup> The department of community medicine at AIIMS, New Delhi also had designed and experimented a similar educational intervention called 'Health Talks' where students prepared and delivered talks related to public health but in contrast to our study the students spoke directly in the community instead of the classroom.<sup>2</sup>

In contrast to our study, Sharma AK et al. study had found that though initially Community-based training enabled students to understand the needs of communities, to relate theoretical knowledge to practical training in a primary-care context, to continuously confront reality before going to the community, their level of confidence in tackling the expectations of the villagers diminished at the end of the exercise. Thereby their study concluded that the family exercise did not produce the desired positive impact on the students' attitude towards family health, and the intended objectives were not fulfilled

adequately.<sup>9</sup> This may be attributed to the lack of communication skills among the students at the time of the family health survey. Therefore we recommend that, interventions aimed at strengthening the communication skills of the students should be done prior to initiation of any field based activities.

Community based medical education which is being practiced in various medical colleges throughout India can fulfill its purpose only if it can address all the three domains of learning process. Advocating only the cognitive domain (Knowledge) while overlooking the affective domain (Attitude) and psychomotor domain (Skills) would never produce any significant impact. Among the psychomotor skills, communication skills occupy the most important part. Thus the student short seminar presentations followed by discussion with the faculty had proved to be an innovative tool for clarification of the knowledge gained and improvement of the student's communication skills.

## CONCLUSION

As recommended by Lancet Commission this is the right time to revisit overall public health education framework in India and design appropriate strategies to transform the existing architecture of public health education. This would certainly require interventions at several levels from governance to implementation.<sup>10</sup>

India is in need of efficient public health practitioners. Poor training and career structures could be attributed for weak public health practices. As recommended by the WHO, the ultimate goal of public health education should be to create a band of "Five Star Doctors" who will bear the essential skills of a (i) care provider, (ii) decision maker, (iii) communicator, (iv) community leader, and/or (v) manager.<sup>11</sup>

The solution for developing efficient public health physicians starts from the undergraduate level. But as far as the reality is concerned students at the undergraduate level perceive community medicine as well as public health as less important branches of medical education and hence show lack of interest towards it. Hence it is the foremost duty of the faculties in the department of community medicine in medical colleges to inculcate interest towards public health by introducing innovative interactive teaching and learning interventions.<sup>12</sup> At the same time any educational intervention planned must neither burden the existing curriculum nor compromise with the quality of teaching. This along with practical hands-on training and effective mentoring would eventually lead to building up an efficient public health system manpower in India.

## Limitations

This study was conducted on a small group of students as a pilot project and had been planned to be implemented

on a larger scale based on the feedback of students and results obtained from the study.

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