



Assessment of perception of undergraduate medical students towards Community Based Medical Education

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Received: 24-06-2017 / Revised Accepted: 27-07-2017 / Published:

ABSTRACT

Introduction: Community-Based Medical Education (CBME) exposes students to patients who are managing their illnesses within their own community contexts and to the real working situation at the places of public health importance.

Objectives: To know the perception of the students about CBME practices and perceived advantages and limitations of CBME practices.

Methodology: A cross sectional descriptive study was carried out amongst 120 students of VI semester from a Medical College. Pre-designed and pre-tested proforma which had Five point Likert scale and open ended questions were used for noting the responses.

Results: Majority of students liked CBME. Comparison of mean scores by unpaired t-test shows that there is no statistically significant difference between preference among boys and girls (p value 0.09 and 0.36 respectively). Students identified improvement in communication skills and opportunity of learning in small groups as advantages of family visits. Experiential learning and building up of prior knowledge were two perceived advantages of visit to places of public health importance. Language barrier was perceived as the limitation during family visit by 74.2% students. Poor audibility was the perceived limitation by 63.3% students during visit to places of public health importance.

Conclusions: CBME model is perceived as effective in improving learning by students provided that we remove the language barrier and improve learning environment at place of visit

Key words: Community Based Learning, Community Based Medical Education, Likert Scale, Family Visits, Public health

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How to Cite this Article: Sheetal Vyas. Assessment of perception of undergraduate medical students towards Community Based Medical Education. Int J Res Health Sci 2017; 5(3): 1-7.

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INTRODUCTION

CBME exposes students to patients who are managing their illnesses within their own family, social and community contexts.¹ From the beginning of medical studies, students should acquire patient-oriented attitudes and communication skills.^{1,2} A learning model that identifies key components of a new learning environment can allow us to adapt to it and its challenges, as well as dissect failures when they occur.^{1,2,3}

CBME refers to medical education, which situates the learner's clinical training in a community setting. Primary care clinicians and other healthcare providers accept learners into their practice, professional community and local community, where they take on the role of delivering much of the curriculum and precepting learners. Essentially, learning occurs in the community.³ Community-based learning is also motivated by the belief that all communities have intrinsic educational assets and resources that educators can use to enhance learning experiences for students. Synonyms include community based learning (CBL), community-based education, place-based learning, and place-based education, among other terms.⁴ Such programs typically include having the student follow the patient from office setting into hospital care and back home to community-based homecare.⁵ Traditional paradigm of education is not appropriate for understanding and learning to resolve the types of open-ended and multidisciplinary problems that are most pressing to our society.^{6,7}

To date no uniform learning model has been proposed to explain the level of success achieved by CBME initiatives. Developing a learning model to explain successful education programs for healthcare professionals seems like an afterthought. These programs are expanding internationally, and greater thoughtfulness around why this decentralized form of medical education works may teach us something about how we learn to be physicians. We may further learn important lessons about medical education, which can be transferred or adapted to new learning environments. CBME implies an interest in improving student's personal communication competence.³ However, negative attitudes towards learning certain things for example communication skills are common, as students do not recognize the training of communication skills as an important part of academic education and medical practice, or do not perceive a need to improve their own skills. So the current study was carried out to know the profile of study participants i.e. students, their perception

about CBME practices, perceived advantages and limitations of CBME practices.

MATERIALS AND METHODS

The present study was carried out amongst 120 students of VI semester from AMC MET Medical College. The study extended from April 2015 to March 2016. It was a cross sectional descriptive study with qualitative components. A Pre-designed and pre-tested proforma was used for data collection which has five point Likert scale, close and open ended questions for noting the responses of students. The project protocol was submitted to the Institutional Ethical Committee and approval was obtained from the committee for carrying out this study. A pilot study was carried out amongst 10 students. Students included in the study were explained about the objectives of the study and the questionnaire. Responses were assessed by administering questionnaire anonymously. Students were given 30 minutes time to fill proforma and submit their response. Data so collected were entered into Excel sheet and analysed using appropriate statistical programs for calculation of frequencies, percentages, means, modes, medians, range, proportions and t-test, odds ratio and z-test. The results were interpreted and compared with the findings of the other studies.

RESULTS

There were 65 boys and 55 girls in the study with M:F of 1.18:1. As far as the residence of the students is concerned, 84(70%) resided in the hostels and 36 (30%) resided in the local residences. Majority i.e. 78 (65%) students had scored 60-70% marks in the last professional year's summative examination. (Table1). The perception of students about family visit and other visits was assessed by using five point Likert scale from strongly dislike to strongly like. Other visits included visit to the places of public health importance, social institutes, occupational institutes, rural and urban health care delivery systems etc. Mean score for boys for family and other visits was 3.85 and 4.06 respectively whereas the same for girls was 3.84 and 3.93 respectively. Comparison of mean scores by unpaired t-test shows that there is no statistically significant difference among boys and girls about preference for family visit and visit to other places (p value 0.09 and 0.36 respectively). Median and Mode of perception of students on Likert scale are 4 indicating that majority of students like CBL. Average number of field visits attended were 8.08+5.54 whereas average number of community visits attended were 3.66+2.50 other visits 6.04+2.90. (Table2)

The advantages of community visits and visits to places of public health importance were assessed by open ended questions. The responses were coded and analyzed. Students perceived that community visits gives them an opportunity to work in small groups, helps in development of leadership qualities, improves communication skills, helps them becoming more empathetic to the patients and connects personal with the social cause. Students perceived that visits to places of public health importance helped them in build-up of prior knowledge, provides an opportunity for experiential learning, helps in linking theory with practice, skill acquisition and leads to better retention of learning.

Odds ratio was favorable for other visits as compared to community visits in the areas namely demonstration and practice for skill acquisition, experiential learning, providing real context of learning, building student's prior knowledge, better retention of learning and interdisciplinary learning. Whereas it is in favor of community visits in the areas namely improvement of communication skills, opportunity of learning in small groups, development of leadership quality, learning empathetic attitude towards patients, connecting personal with public cause, confidence building. Statistical significance of difference between proportions was compared between family visit and visit to the places of the public health importance and the results are as shown in the table 3.

Factors interfering with the TL activities during CBL sessions were also asked to the students and findings were analysed. It was observed that 89(74.1%) students reported language barrier followed by 61(50.8%) who mentioned informal learning atmosphere as the interfering factor in learning. The other factors which were identified as interfering factors during community visits were difference in theory and practice and need for prior preparation. At visit to places of public health importance the poor audibility was mentioned as interfering factor by 76 (63.3%) students followed by difference in theory and practice which was mentioned by 69 (57.5%) students. Other factors were less interaction with facilitators, requirement for prior preparation etc. (Figure1)

Discussion: In the present study, 120 students of final MBBS in their 6th semester were included as participants. Currently as a part of CBL, students are taken for family visits and to the places of public health importance during their posting in the community medicine department. The liking of the students for such visits was noted on a five point Likert scale from strong dislike to strong liking. It was observed that students had liking for such

visits as a part of teaching learning method for community medicine. In an article by Saranya Nagalingam et al also, it was mentioned that three clinical postings in community medicine department during 3rd, 4th and 6th semesters should be properly utilized to orient the students towards the current health situation, health behaviors of the community, socioeconomic dimensions of health which influence the occurrence of a disease. The study also suggested that the students can be trained to impart health education activities to the local community regularly so that the complete picture of health, disease and its prevention aspects will be practically implemented in future during their career.⁸

In the present study it was observed that students perceived that community visits help them in connecting personal and public purposes. They also perceived that visit to places of public health importance helped in better retention, encourage coherent investigative and problem based skills and transfer as well as provides real context of learning. These findings of my study are similar to the observation in a study by Ehi U Igumbor in which it was observed that CBME helped to sensitize students to clinical situations that reflect the social, cultural and economic factors important in the causation of disease; develop in them an appreciation of the importance of health promotion and disease prevention; and expose them to methods of intervention that are applied as close as possible to communities served by the health units.⁹ In an another study by Len Kelly, Lucie Walter, David Rosenthal it was observed that upon entering clinical rotations and working regularly alongside clinical teachers seeing patients, learning is facilitated by the students becoming embedded in the subculture of medical practice and the culture of the local community.¹

In the present study, student's perceived that experiential learning was very important for them while visiting the places of public health importance and this is similar to the findings of a study by Schreier where it was observed that experiential learning program enabled medical students to obtain an understanding of children's needs and work through their own feelings which are aroused when confronted with children who have been deprived and abused.¹⁰

In present study, students mentioned the informal learning atmosphere and found this as strength of CBME. They also found learning in such atmosphere more interesting (at some places they found the same factor interfering in their learning) which was similar to the findings in a study by

Duggan where there was a significant increase in the level of interest in the future practice of obstetrics only in the general practice group as compared to the group which had clinic based learning ¹¹

In the present study 83 (69.2%) of students felt that their communication skills improved due to visit to the families allotted to them and the findings are similar to the findings in a study by Walter's where it was concluded that students gain strong communication skills and excellent clinical reasoning and management skills and are more likely to subsequently apply to primary care and rural training programs.¹² The present study reported that students perceived the benefit by instant feedback and supportive supervision by facilitators during their visits and this is similar to the findings in a study which concluded that the close working relationships between learners and their clinical supervisors over time allows for the maturation of an apprenticeship relationship. ¹³In one more study it was concluded that students were likely to receive consistent instruction and feedback because of the continuity of supervision. ¹⁴

It was observed in my study that students perceived that community visits gave them an opportunity for learning in small groups and gave a sense of companionship with their fellow learners. Another study also observed that CBME placements can provide students with a small group of primary care and specialty physicians, nurses and allied health professionals who can welcome a student as a novice member of their team. ¹⁵ The present study observed that visits did help students becoming more empathetic to the patients which is also found in an another study where it was observed that this enables students to develop a relationship with individual patients and contribute to their care.¹⁶

In present study students perceived that there was development of leadership qualities due to such

teaching learning activities which was also observed in an another study where students in CBME placements witnessed and were influenced by leadership roles rural doctors and other health professionals have within their community. ¹ In my study, students perceived that the factors such as language barrier, paucity of time, poor audibility, learning in proportion to prior preparation etc. as the interfering factors for learning during CBME sessions. In a study by Mennin SP et al it was concluded that the high degree of variability of learning experiences at different community sites and with different preceptors; the time required to travel to community sites; and dealing with negative attitudes were the barriers to CBME. ¹⁷

Conclusion and recommendations: Placement and visit of the students in the community and to the places of public health importance are very important teaching learning (TL) activities and are perceived of a great value in overall development of the future Indian Medical Graduates. Everyone benefits from CBME: students, faculty, health centers and the community at large. Such TL activities provide a breadth of experience, which enhances learning through the development of rich relationships (with preceptors, other healthcare providers, patients and the general community). CBME theory enhances learning through the provision of a uniquely meaningful personal learning experience, which matures a learner personally and clinically. I feel that there is lack of uniform model across the nation for such TL activities and also there is underutilization of such learning opportunities and the many areas are yet unexplored to a great extent. At the same time, it is equally important to understand the limitations and overcome the barriers while planning CBME activities.

Conflict of interest: The authors declare that no conflict of interests existed in the organization, results, presentation and the finance of the research article.

Table1: Socio-demographic profile of the students

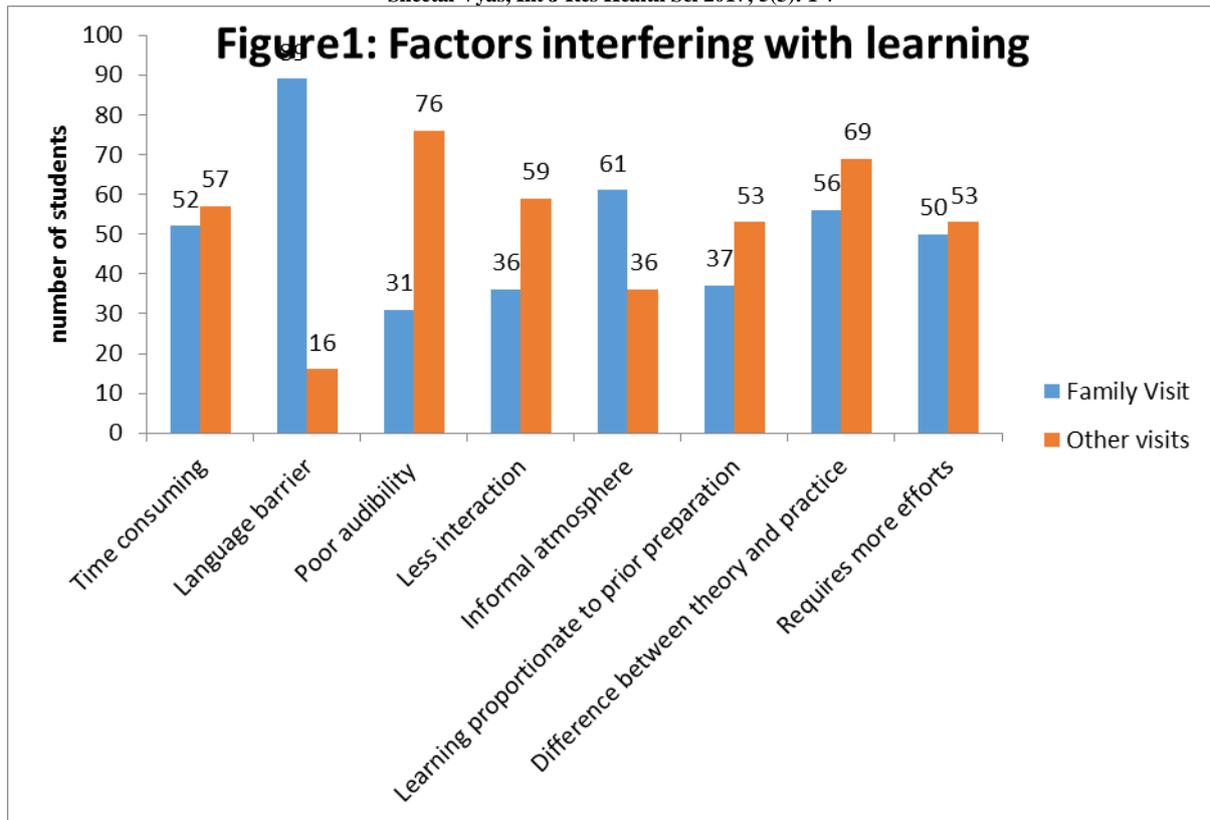
Sr. No.	Variable	Number (n=120)	Percentage
1.	Gender		
	Male	65	54.2
	Female	55	45.8
2.	Residence		
	Hostel	84	70
	Local	36	30
3.	Marks in last summative examination (%)		
	50-59	18	15
	60-69	78	65
	70-79	19	15.8
	>80	1	0.8
	Not mentioned	4	3.4

Table2: Perception of students about family visits and visit to other places as assessed by using five point Likert Scale

Statistical parameters	Boys (n=65)		Girls (n=55)	
	Family visits	Other visits	Family visits	Other visits
Mean	3.85	4.06	3.84	3.93
Standard deviation	0.73	0.60	0.42	0.61
Median	4	4	4	4
Mode	4	4	4	4
Range	2-5	2-5	2-5	2-5

Table3: Student's perceived advantages of the family visits and visits to other places

Aspects.	Family Visits	Other Visits	Odds ratio(CI)	P value
Observation of the real working / community situation	63 (52.5)	63(52.5)	1(0.60-1.7)	1
Demonstration and practice for skill aquisition	44(36.7)	79(65.8)	3.33(1.96-5.65)	<0.001
Informal learning atmosphere	58(48.3)	56(46.7)	1.07 (C.I. 0.64-1.78)	0.90
Experience sharing by the person working there	44(36.7)	88(73.3)	4.75 (C.I. 2.74-8.23)	<0.001
Leads to improvement of communication skills	83(69.2)	44(36.7)	3.88 (C.I. 2.27-6.63)	<0.001
Interactive session	69(57.5)	63(52.5)	1.22 (C.I. 0.74-2.04)	0.52
Gives an opportunity of learning in small groups giving a sense of companionship	91(75.8)	34(28.3)	7.94 (C.I. 4.46-14.13)	<0.0001
Community provides real context of learning	47(39.2)	69(57.5)	2.10(C.I.1.26-3.52)	<0.007
Builds student's prior knowledge	39(32.5)	98(81.7)	9.25 (C.I.5.01-16.86)	<0.0001
Encourages coherent investigative and problem based skills	55(45.8)	67(55.8)	1.49 (C.I.0.9-2.49).	0.16
Using knowledge promotes better retention and transfer	45(37.5)	71(59.2)	2.42 (C.I.1.44-4.06).	0.001
Connecting personal and public purposes	79(65.8)	55(45.8)	2.28 (C.I. 1.35-3.83)	<0.003
Leads to Confidence building	71(59.2)	54(45)	1.77 (C.I.1.06-2.96)	<0.04
Interdisciplinary learning	52(43.3)	69(57.5)	1.77 (C.I.1.06-2.95)	<0.039
Linking theory with practice	62(51.7)	76(63.3)	1.62 (C.I.0.96-2.71)	<0.09
Develop leadership qualities	83(69.2)	43(35.8)	4.02 (C.I.2.35-6.88)	<0.0001
Helps becoming more empathetic to the patients	81(67.5)	39(32.5)	4.31 (C.I.2.51-7.41)	<0.0001
Instant feedback and supportive supervision by facilitators	49(40.8)	73(60.8)	2.25 (C.I.1.43-3.77)	<0.003



REFERENCES

1. Len Kelly, Lucie Walter, David Rosenthal. Community-based medical education: Is success a result of meaningful personal learning experiences. *Education for Health*, 2014;27(1):47-50
2. Community Based Learning- By Coalition for community schools available on http://www.communityschools.org/assets/1/AssetManager/CBL_Book_1_27_06.pdf as accessed on 22/02/16
3. An introduction to community based Learning available on http://academics.holycross.edu/files/cbl/Introduction_to_Community-Based_Learning.pdf as accessed on 15/04/15
4. <http://edglossary.org/community-based-learning/> as accessed on 22/2/2016
5. <https://www.clarku.edu/community/pdfs/Part%20III%20Benefits%20&%20%20Models.pdf> as accessed on 22/2/16
6. Lisa Garoutte and Kate McCarthy-Gilmore. Preparing students for community based learning using an asset based approach. *Journal of scholarship of teaching and learning*, Dec 2014;14(5):44-61
7. Gerhard Fischer, Markus Rohde and Volker Wulf : community based Learning: the core competency of residential research-based universities: *International Journal on Computer-Supported Collaborative Learning (iJCSCL)*, Springer, in print. As available on <http://13d.cs.colorado.edu/~gerhard/papers/final-iJCSCL07-rhode-wulf.pdf> accessed on 23/02/16
8. Saranya Nagalingam et al. Contemporary Medical education- Requires a curriculum Revamp. *ijstrm*, March 2016; Vol. 3 (1): 21-24.
9. Igumbor EU, del Rio, A, Buso DL, Martinez JM. Training medical students in the community - Memoirs and reflections of the University of Transkei Medical School *Med Educ Online* [serial online] 2006;11:2.
10. Schreier RA, Danilewitz D. A community-based learning experience for medical students. *Med Educ*.1989 Jan;23(1)86-90.
11. Duggan PM, Mantell CD. Community-based learning in obstetrics for undergraduate medical students. *Med Educ*. 1994 Mar;28 (2):116-9.
12. Walters L, Greenhill J, Richards J, Ward H, Campbell N, Ash J, *et al*. Outcomes of longitudinal integrated clinical placements for students, clinicians and society. *Med Educ* 2012;46:1028-41.

13. Walters L, Prideaux D, Worley P, Greenhill J. Demonstrating the value of longitudinal integrated placements for general practice preceptors. *Med Educ* 2011;45:455-63.
14. Ten Cate O. Entrustability of professional activities and competency-based training. *Med Educ* 2005;39:1176-7.
15. Walters L, Stagg P, Conradie H, Halsey J, Campbell D, D'Amore A, *et al.* Community engagement by two Australian Rural Clinical Schools. *Australas J Univ Community Engagem* 2011;6:27-56.
16. Walters L, Prideaux D, Worley P, Greenhill J, Rolfe H. What do general practitioners do differently when consulting with a medical student? *Med Educ* 2009;43:268-73.
17. Mennin SP, Vince A, Kalishman S, Mines J, Skipper B, Serna L. The interdisciplinary generalists curriculum project external evaluation team final report. Office of Program Evaluation, Education and Research, University of New Mexico School of Medicine, 1999.