

Title: Near Peer Tutoring (NPT) in Medical Colleges in Bangladesh: A Pilot Project

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What problem was addressed: Bangladesh is a densely populated country having total 92 medical colleges and 32 dental colleges/units. Medical education in Bangladesh is facing many challenges. One of the major one of those is absolute shortage of preclinical teachers. Medical graduates are losing their interest to build career in preclinical subjects due to less financial benefits and social status. Other major challenges are shortage of subject specific teachers in preclinical subjects, and disproportionate teacher-student ratio. Besides, low level of teacher-student interaction in respect to the large numbers of medical colleges is also a problem of quality teaching in medical education in Bangladesh. To address these problems, we aimed to test the feasibility of the near peer tutoring (NPT) approach at undergraduate medical education in Bangladesh. NPT involves more experienced students (senior students) acting as tutors who are ideally placed to pass their knowledge and experiences to their immediate junior students. The NPT approach was found effective in developed and many developing countries throughout the world; however this is the first time we tested it in Bangladesh through our project. Our project findings will help to improve the existing above mentioned problems of medical education in Bangladesh.

What was done: Our pilot project was conducted at Shaheed Suhrawardy Medical College, Dhaka. We identified potential stakeholders such as Centre for Medical Education (CME), faculties & students of the medical college and sensitized them to involve in this project's activities. Ten senior students were selected as NPTs from the study medical college based on academic performances and motivation. NPTs were trained as tutors by the expert faculties from CME & FAIMER fellows. We developed all the training materials to train NPTs in consultation with CME & FAIMER fellows. The trained NPTs conducted 20 small group tutorial classes for Physiology and Biochemistry and demonstration sessions for Anatomy under this project. Each NPT conducted 2 sessions according to his/her interest on specific topics. About 25 junior students were selected randomly for each session. Performances of NPTs were evaluated by the independent observers (IO) during these sessions using a checklist & self-evaluation by themselves using the same checklist. Existing faculties of the study medical college who were trained in teaching-learning methods from CME or faculties from CME were the observers in the study. The performances of the NPTs were also assessed by the students' satisfaction survey which had been done immediately after each session. Indicators for the observation checklist and the satisfaction questionnaire for junior students were developed based on literature review and consultation with experts from CME. Thirteen different indicators on the quality of the organization of the sessions, use of lecture materials, lectures delivered by NPTs, NPTs-students interactions, organization of group discussion in the classes were used in both the observation checklist and the satisfaction questionnaire. Data obtained through the observation checklist and the questionnaire was analyzed to see the performances of the NPTs in medical education in Bangladesh.

What was learned: We successfully implemented the NPT approach in the medical education in the study medical college in Bangladesh. In total, 20 sessions were conducted by NPTs where 498 students attended. The average number of attending students was about 25 per session. All the sessions were observed by NPTs themselves (n=20) as well as the independent observers (n=33). The NPTs rated their sessions as 4.58 out of 5. About 93% of the sessions were rated by the NPTs as either competent or large extend (>3 score out of 5) based on all the quality indicators of the sessions. Almost similar assessments were done by the IOs. The average quality score of

the sessions obtained from the IOs was about 4.67 out of 5. About 97.6% of the sessions got >3 scores (competent/large extend) from the IOs. The average quality scores of the sessions provided by the NPTs were statistically similar to the scores provided by the IOs ($p=0.210$). The junior students were highly satisfied with the sessions (overall mean satisfaction score 4.73 out 5). About 98.12% of the students agreed to all of the quality indicators of the sessions. Considering the scores provided by the NPTs, the IOs and the students, it was found that the overall quality of the sessions was good and well-accepted by the students and faculties of the study medical college. The NPTs will be followed for five years to observe how many of them develop their careers in preclinical subjects. However we have faced several challenges such as- i) The academic schedules of the NPTs and the junior students were not the same. So, making a schedule involving both of the groups at the same time was very difficult. We overcame this challenge through positive motivation on the usefulness of NPT; ii) Interests of the management of medical colleges for NPT were not same. The ShSMC was highly interested in NPT and successful completion of the study was feasible there; iii) Faculties of the college felt NPT as personal challenge which was overcome through additional discussion; iv) Some of the important policy makers were not familiar with the medical education. Obtaining their support was vital for the completion of the study. This was possible after explaining them about the shortage of the teaching staff and the need of NPT system in the medical education.

Therefore, the project concludes that the NPT approach is feasible and highly accepted by the students and faculties of the study medical college in Bangladesh. The NPT approach could be further scaled up in the medical education of Bangladesh to confirm our project findings and for its policy recommendations.