

## Abstract

**Background:** Participatory rural appraisal (PRA) is an effective and efficient approach to deliver community-based education. The objective of the present study was to train first professional phase undergraduate medical students in PRA methods, assess change in knowledge levels, identify factors enabling effective implementation of PRA methods in the local community, and to evaluate the training process and the program as a whole.

**Methods:** It was a quasi-experimental study conducted among first professional phase undergraduate medical students in a medical college. The study employed total sampling and all 250 students were included in the study that was carried out in two stages, namely training of students in PRA methods in classroom, followed by implementation of the same in the community by the trained students. At each stage, students were asked to provide feedback on different aspects of the training, and feedback was obtained from the community as well. Institutional Ethics Committee approval was obtained prior to the start of the study and students were assured that the study will not have any impact on academics. The statistical analysis was done using descriptive statistics and categorization of the qualitative responses.

**Results:** A total of 245 students with a mean age of  $20 \pm 2.3$  years were trained in PRA methods. There was a significant improvement in the mean score of students in the post-test ( $8.80 \pm 1.01$ ), when compared with the mean scores in the pre-test ( $3.47 \pm 1.06$ ), and this difference was found to be highly statistically significant. The employment of interactive teaching methods, opportunity to interact with local community and implement PRA methods, and fun-filled theory and practical sessions were identified as the most encouraging factors. However, not being aware of the native language, and limited time to interact with allotted families were recognized as the major barriers.

**Conclusion:** In conclusion, the training imparted to medical students on selected PRA methods brought about a statistically significant improvement in the knowledge of medical students about transect walk, social mapping, and force-field analysis. In addition, students were quite efficient with regard to implement PRA methods in the community, as evident by their ability to develop rapport, convince local residents to be a part of social mapping, and open-up regarding their personal problems.

**Keywords:** Community-based education, Participatory rural appraisal, Social mapping, Force field analysis, Medical students