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ORIGINAL RESEARCH ARTICLE

EFFECTIVENESS OF TEACHER TRAINING CONDUCTED AT CHITWAN MEDICAL COLLEGE, BHARATPUR, NEPAL

GP Dhungana[1]*, RM Piryani[2], ML Chapagain[3], M Neupane[4]

[1] School of Public Health and Department of Community Medicine, Chitwan Medical College
[2] Department of Internal Medicine & Medical Education, Chitwan Medical College
[3] Department of Microbiology, Chitwan Medical College
[4] School of Nursing, Chitwan Medical College

***Correspondence to:** Mr. Govinda Prasad Dhungana, School of Public Health and Department of Community Medicine, Chitwan Medical College.*
Email: dhunganagovindana2012@gmail.com

ABSTRACT

Teaching and learning are equally important for the teacher. For teaching to be effective, whereby participants learn better, training of teachers is imperative. Teacher's training is one of the important aspects of faculty development at Chitwan Medical College (CMC) and this study was done to assess the effectiveness of the teachers' training pre test, post test experimental group design. In pre test, only 5.6% of the participants had adequate knowledge whereas after teacher's training, 27.7 % had adequate knowledge. The mean (±SD) knowledge score before and after the intervention was 26.7±5.6 and 33.6 ± 5.6 respectively. The percent change in knowledge after intervention was 25.8 was statistically significant p value <0.001 .Which suggesting that the teachers' training was an effective intervention.

Key words: *Faculty development, pre test, Post test, Teachers' training.*

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INTRODUCTION

Teaching and learning are two side of the same coin. There are various methods of teaching such as lecture, problem based learning, group discussion, individual presentation, assignment, seminar, workshop, conference, brain storming sessions, role play, case study, etc. A variety of methods are explored for teaching practices depending on the nature of study, number of participants and facilities available. No method is perfect but all methods have pros and cons. When teachers think the best in terms of improving their teaching method, their content and knowledge have to be conveyed in the simplest manner to the participants.[1,2] Teaching is essential for healthcare professionals to enhance their knowledge, practice and skill in their professional life.[6,7]

Faculty developments have an impact on the institutional climate and organization. Quality faculty members in any institution, enhance the teaching, research and administrative skills for development of the institution. Effective teaching is positively correlated with participants' learning. Training and seminars etc can be integral for comprehensive quality improvement for faculty.[8]The activities like health training, workshops, seminars, short courses, site visits, fellowships and other longitudinal programs have been designed to improve teacher effectiveness across the medical education continuum and they have been offered to healthcare professionals at local, regional and national levels.[6] Teachers need to instruct to participants in effective ways of giving precise feedback that addresses specific aspects of their learning experience.[1]Professional development for teacher reveals that there is a long way to go in understanding methods of effective practices with respect to the various activities on teaching and learning.[9] Effective teachers motivate, educate, and

exhilarate their participants in the subject matter.[8] For the teachers to be effective, the teacher must acquire adequate knowledge, skills and have appropriate attitude.[1] Teachers' training is one of the innovative strategies to enhance knowledge and update teaching skills of health-professionals who can then exert a positive impact on health care of the society.[8]

The objective of this study was to assess the improvement in knowledge of health care profession teacher after the teachers' training

METHODS AND MATERIALS

This study was an experimental study with pre-test, post-test design.

The intervention i.e. teachers' training was conducted from Sep 22 to Sep 28, 2014 in Chitwan Medical College Bharatpur, Nepal. Altogether, 18 participants participated in the training from clinical sciences, basic science, public health and nursing departments. Ten national and international resource persons facilitated the training besides local facilitators. The behavioral objective, principles of adult learning, learning style, teaching and learning methods, communication skill, feedback skill, problem base learning, micro teaching and assessments were the main sessions of training.

Hypothesis of this study was that, there will be significant gain in knowledge score of participants after the teachers' training. To assess knowledge, a semi structured self-administered questionnaire was used. There were true/ false, multiple choice, multiple response and rating scale questionnaires. Questionnaires were prepared on the basis of objective of intervention where as various methods of teaching were introduced for effective teaching. For statistical analysis, one mark was given for correct answer and zero mark for incorrect answer and for non response. To identify the level of knowledge, <50% were categorized as inadequate, (50 - 75) % were categorized as moderate and >75 % were categorized as adequate level of knowledge.[4]

Data management and analysis

The collected data was checked for completeness, accuracy and consistency. The collected data was coded and entered in Epi Data 3.1 and exported to IBMS SPSS version 20 for analysis. Data were analyzed in descriptive and inferential statistics. The total knowledge score of pre test and post test was not statistically significant by kolmogorov smirnov test as p-value was 0.2. As the data was normal and hence paired t test and independent t test were used. Paired t- test was used to ascertain differences in mean scores between the written pretest and post test. Results were expressed and reported as a mean of right answers ± SD. A p- value < 0.05 was considered statistically significant.

RESULTS

Out of the total 18 participants, 14 (72.8%) were male and 4 (22.2%) female. The mean age of participants was 36.44±10.12 (SD) years, whereas minimum and maximum age was 27 and 70 years respectively. Nine (50.0%) were from clinical sciences, 6 (33.3%) from basic sciences and 3(16.7%) from nursing and public health faculty. A majority (72.2%) of the participants had completed their highest academic degree in recent past (after 2010 AD), remaining 5(27.8%) had completed their highest academic degree between 1978- 2010 AD. Out of the total 18 participants, 10 (55.5%) participants had previous work experience varying from one to forty years.

In pre test, 5.6 % had adequate knowledge, 72.2 % participants had moderate knowledge, and 22.2 % had inadequate knowledge. After the intervention, 27.7% had adequate knowledge, 66.7% had moderate knowledge, and only 5.6 % had inadequate knowledge. (Table: 1)

Table 1: Assessment of pre test and post test level of knowledge regarding various teaching method

Level of Knowledge	Pre test		Post test	
	No.	%	No.	%
Adequate	1	5.6	5	27.7
Moderate	13	72.2	12	66.7
Inadequate	4	22.2	1	5.6

The mean knowledge score pre and post intervention was 26.7±5.0 and 33.6±5.6 respectively. Paired t–test was used to compare the effectiveness of intervention. The percent change in knowledge after intervention was 25.8 % with 95 % CI (0.056-0.46). The knowledge after the intervention was statistically

significant at 1% level of significance (p value <0.001). Thus, the post intervention knowledge score was better than the pre intervention knowledge score. Hence, the intervention was an effective. (Table: 2)

Table: 2 Comparison of mean scores of knowledge before and after teaching

Variable	Pre test (Mean± SD)	Post test (Mean± SD)	t value	P value
Total knowledge score	26.7±5.0	33.6±5.6	-4.34	<0.001

The mean knowledge score of the participants in both pre and post test interventions was not statistically significant with sex of the participant and with Previous work experience. (Table 3)

The overall increase in knowledge of the different teaching methods, after intervention, was found to be greater in participants from the clinical sciences faculty than in participants from the basic science, nursing and public health faculty, whereas the baseline knowledge (pre-intervention) was better in the basic science, nursing and public health faculty than in the clinical faculty. (Figure 1)

Table: 3 Comparison of knowledge before and after intervention regarding sex and work employment status

Variable	n	Pre test			Post test		
		Mean ± SD	t -value	P-value	Mean ± SD	t -value	P- value
Sex							
Male	14	26.1±4.2	-0.92	0.374	33.0±5.8	-0.78	0.45
Female	4	28.8 ±7.6			35.5±5.0		
Previous Work experience							
Yes	10	26.6±5.5	-0.45	0.66	34.4±4.2	0.26	0.80
No	7	27.7±4.3			33.7±6.9		

Note: Compared with independent sample t test,

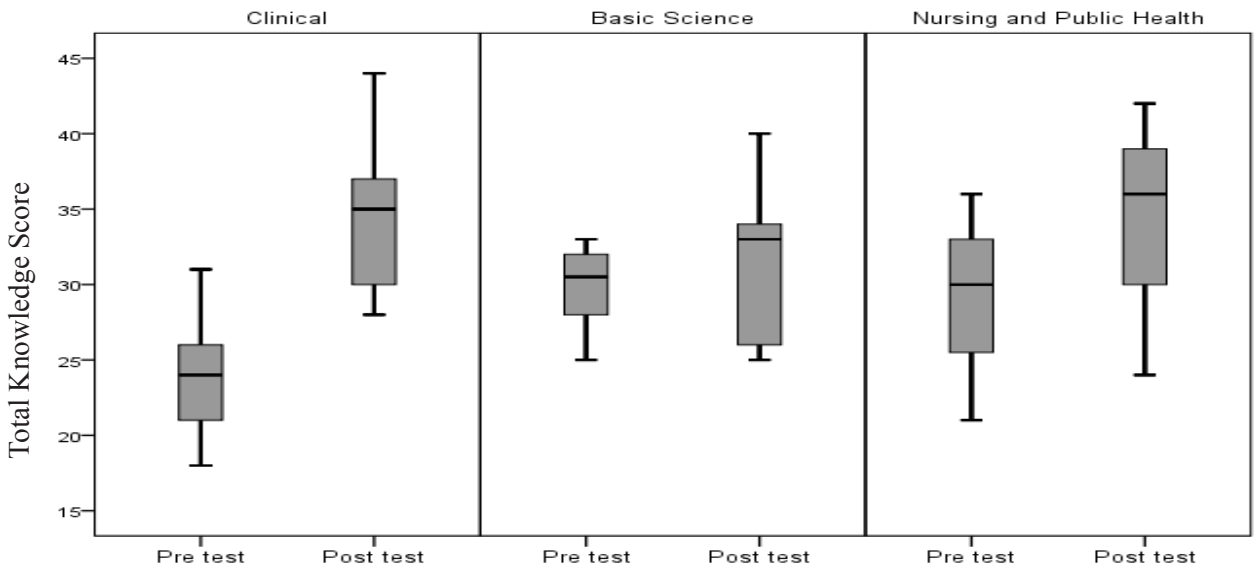

Figure 1: Total Knowledge score of Pre test and Post test regarding educational background of the participants

DISCUSSION

The findings of the present study are discussed with reference to the objective and hypothesis. This study shows that most of the participants significantly improved their knowledge after the 6 days training. The study showed that 27.7% participants had adequate knowledge after the intervention while only 5.6% had adequate knowledge before the intervention. The percent change in knowledge after intervention was 25.8 %. The findings of this study were similar to the study conducted by M. Stein et al.[8, Y]. Steinert et al.[6] and B.Muneeswari[10] which reported significant changes in learning and behavior. The teacher training program appears to be consistently associated with effectiveness, thus improves the learning ability of participants.[3, 6, 8, 10,11] This study shows no significant difference in pre and post knowledge of participants by sex and previous work experience.

After the six days of intervention, the participant's knowledge was slightly higher among clinical sciences faculty than those of basic science, nursing and public health faculty whereas the baseline knowledge was comparably better of the basic sciences, nursing and public health faculty than of the clinical sciences faculty. This finding is somewhat consistent with the finding of Maharjan et al.[5] The study conducted by Maharjan et al showed the pre test knowledge of doctor and senior nurses was better than junior nurses and medical students. However the post test knowledge was statistically significant found only for junior nurses and medical students.

CONCLUSION

The percent change in knowledge after intervention was 25.8 %. The difference of mean knowledge after intervention was statistically significant at p value <0.001. It means the teachers' training was an effective intervention.

LIMITATION

This study did not measure the effectiveness of individual method of teachers training.

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REFERENCES

1. Shahida S. Effective teaching methods at higher education level, Department of Special Education,University of Karachi.Pakistan

2. Maryellen W. Effective Strategies for Improving College Teaching and Learning Available online at:www.FacultyFocus.com

3. Paudel RK, Uprety DK. Effectiveness of structured teaching program in improving knowledge and attitude of school going adolescents on reproductive health ; Kathmandu University Medical Journal 2005;3(4):380-83.

4. Joseph JE, Mathew S. The Effectiveness of Teaching Programme Regarding Prevention and Management Napkin Dermatitis in Allahabad; International Journal of Public Health Science (IJPHS) March 2013;2(1):7-16.

5. U Maharjan, L Rajbanshi, G Dhungana. Effectiveness of helping babies breath(HBB) training on knowledge for health professionals and medical students at Chitwan Medical College. Journal of Chitwan Medical College 2014; 4(8): 17-19. Available online at: www.jcmc.cmc.edu.np

6. Steinert Y, Mann K, Centeno A, Dolmans D, Spencer J, Geluta M, et al. A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education, 2006;BEME Guide No. 8, Medical Teacher. 2006;28(6):497-526.

7. Robert A, Barry. Teaching Effectiveness and why it matters. Department of Education, the

Chalkboard Project; Marylhurst University 2010.

8. Stein SM, Fujisaki BS, Davis SE, MacLean LG. A 1 day course to improve the teaching effectiveness health professionals faculty members. American Journal of Pharmaceutical Education 2012:76(1):15.

9. Lawless KA, Pellingrino JW. Review of Educational Research Dec 2007; 77(4): 575. Available on http://rer.aera.net

10. Muneshwari B. A study to assess the effectiveness of planned health teaching program using child-to-child approach on knowledge of selected first aid measures among school children in selected schools at Dharapuram in Tamil Nadu, India.Journal of Raja Rajeshwari College of Nursing 2014;3(1). Available www.gjmedph.org

11. Baral N, Gautam A, Lamsal M, Paudel BH, Lal Das BK, Aryal M. Effectiveness of Teachers' Training in Assessment Techniques: Participants' Perception 2011:9(3):35.