

Thesis Title	The Development of Operating Instruments Handling Technique Competence for Practical Nurses to Overcome a Scrub Nurse Shortage in Plastic Surgery Unit of Siriraj Hospital
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ABSTRACT

Despite the fact that the public always expect the health care provider to deliver them the best kind of support, shortage in health care workforce is an undeniable situation they are facing today. Shortage of registered nurse workforce is one of the most challenging problems for the health care provider especially those in the National Health Services sector. One of the ideas that might overcome the shortage of registered nurses is to sort out and relocate the uncomplicated kind of job that can well be handled by a lower level of professionals which are more available and trainable.

This study was a quasi-experimental study, utilizing a CIPP model to evaluate a training course designed to explore the ability of the practical nurses to handle the basic operating room instrument handling technique previously exclusively handled by registered nurses. The study was done in plastic surgery operating room, department of surgery, Siriraj Hospital. The training course consisted of 20 hours of formal lectures and 12 hours of hands-on practice. Each participating practical nurse was then allowed to take the place of a registered nurse job in operating room instruments handling technique under supervision of a registered nurse during the 8 weeks of study.

The knowledge and technical skill of each participant together with level of satisfaction of the surgeons and co-workers were evaluated immediately, 4 weeks and 8 weeks after the training course. The impact of the program upon the efficiency of operating room utilization was also observed.

Immediately after training theoretical knowledge was significantly better than before the training ($p < 0.001$). Technical skill in basic operative instruments handling technique was significantly better at 8 than at 4 weeks after the course ($p < 0.01$). Satisfaction of the surgeons and co-workers was better at 8 than at 4 weeks after the course ($p < 0.01$). The training course was associated with increase in efficiency of operating room utilization. The average rate of case-cancelled during the period of 2 months before the study was 16.25%. This average was reduced to 12.30% during 5th to 8th week after the training course. In addition the plastic surgery service could open one additional room without any demand on new personnel reflecting the impact on efficiency of operating room administration.

The appropriateness of the training course was also evaluated by the participating practical nurses enrolled in the course. The input evaluation was as follow. The appropriateness of course content to be implement in the real-world everyday work was scored as most appropriate ($\bar{X} = 3.75$). The instructors were scored as good. The workshop materials and utilities were scored best. The length of course lectures were scored fair. The hand-on workshop was scored unsatisfied ($\bar{X} = 1.25$). The 9 weeks of study period was scored best. The overall rating of the study was score best.

The result of this study suggested that it is very likely that by slightly increasing the length of formal lecture and hand-on workshop the training course can be an effective mean to solve the problem of scrub nurse workforce shortage and increasing the efficiency of operating room service.