



Neonatal resuscitation program in Solomon Island: A first experience

Ching-Ju Chen^{1, 2}, Fan-Hao Chou^{2 *}, Shih-Huai Hsiao³, San-Nan Yang⁴, Pei-Ling Wu⁵

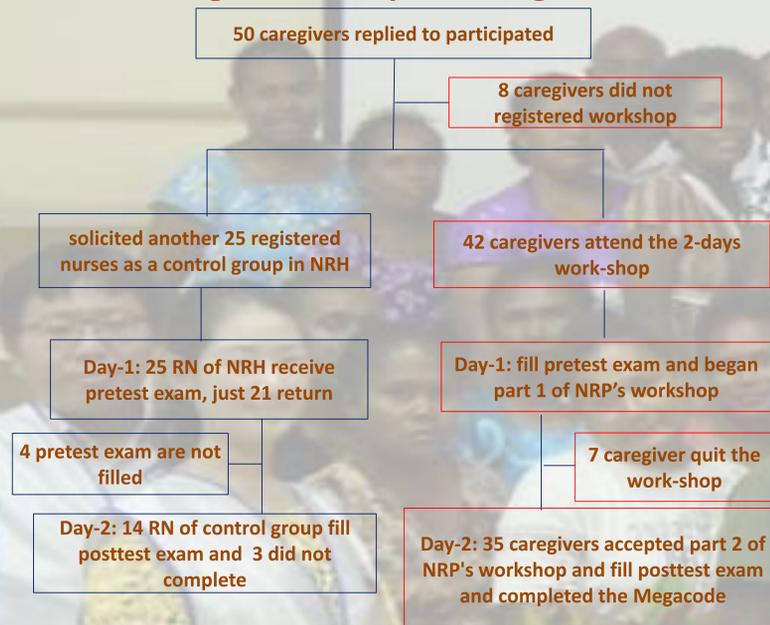
1. Department of Nursing, Kaohsiung Medical University Hospital, Kaohsiung Medical University; 2. College of Nursing, Kaohsiung Medical University, Kaohsiung, Taiwan; 3. Senior Specialist, Superintendent Office, Kaohsiung Medical University Hospital, Kaohsiung Medical University; 4. Institute of Clinical Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; 5. College of Medicine, Kaohsiung Medical University; * Correspondence



Abstract

Although neonatal Resuscitation Program (NRP) has become a neonatal standard emergency practice and has been widely popularized in more than 160 developed countries or high-economic developing countries, it is still quite unfamiliar in some developing countries which lack of medical resources. Therefore, we arranged training course of the 6th NRP to perinatal care-providers in Solomon Islands, in order to improve neonatal mortality.

Figure 1. Study flow diagram



Methods

This study was planned to investigate whether the NRP knowledge and skills of physicians and nurses in the Solomon Islands would improve after receiving this NRP training program. Following the 6th NRP textbook design, we arranged two-day training course with DVD. All the participates must receive written test including twenty-five single-answer-multiple-choice questions of the NRP knowledge, which a total score is 25. And after the training course, we arranged a written test with the same questions and mock tests (Megacode). There were 35 participates involved in this study, including 3 physicians (two pediatricians and one OBS & GYN) (3/35, 8.6%), 20 registered nurses (3 pediatric nurse, 3 researcher of nursing, and 14 clinical nurses) (20/35, 57.1%), and 12 midwives (12/35, 34.3%).

Table 1. Demographic characteristics of participants

Characteristics	Control group (N=14)	Study group (N=35)	t
Age	39.62 ± 7.01	35.29 ± 5.69	2.20*
Working years	15.00 ± 8.15	8.8 ± 5.99	2.82*
Working place			13.52**
NRH	14(100%)	15(42.9%)	
Other province	0	20(57.1%)	
Gender			0.834 [‡]
Male	0	2(5.71)	
Female	14(100)	33(94.29)	
Occupation			3.23 [‡]
Doctor	0	3(8.57%)	
Nurse	14(100%)	32(91.43%)	

* P < .001

[‡]Chi-Square

Results

The average score of the written test before the NRP training course was 11.5 ± 2.9 (95% CI =10.5-12.5), score range 5-17. The average score of the written test after training courses was 18.4 ± 2.4 (95% CI =17.6-19.3). Pair-t test analysis showed that the scores of NRP knowledge written test was significantly improved after the intervention of training course (t = 12.9, P <.0001). The average score of Megacode was 21.5 ± 5.5 (95% CI = 19.6-23.4). According to the test standard of the 6th edition of NRP, only 10 nurses passed the Megacode (10/35, 28.6%), the range of scores was 15-24; and all of 3 physicians passed the Megacode.

Table 2. Pretest and posttest scores of control and study groups

	M ± SD	t	P
Pretest scores		-1.876	.067
Control group	9.93 ± 1.94		
Study group	11.51 ± 2.90		
Posttest scores		-9.106	<.0001
Control group	11.5 ± 2.35		
Study group	18.43 ± 2.43		
Pretest scores - Posttest scores		3.074	.004
Control group	1.57 ± 2.28		
Study group	6.91 ± 3.17		

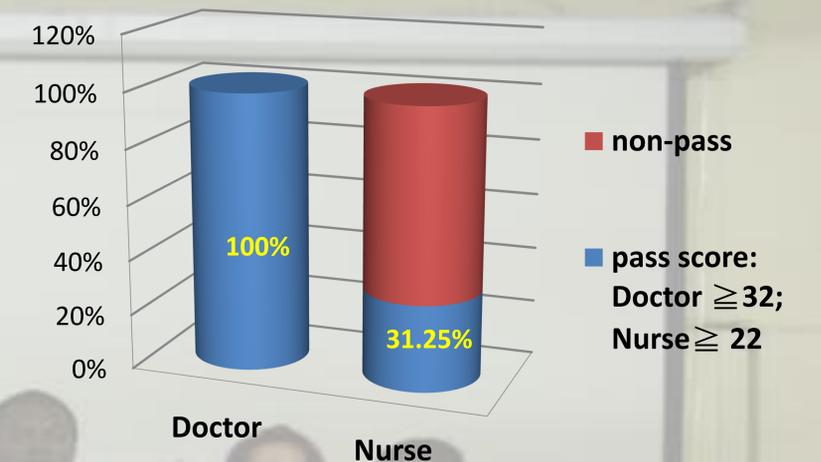


Figure 2. Pass rate of Megacode for Doctor and nurses

Conclusion

The NRP training course might improve the knowledge of newborn resuscitation in perinatal care providers in Solomon Islands based on comparisons of mean scores within groups and between two groups on NRP training. However, from the comprehensive skills test, we found that NRP protocol or training courses might be adjusted to fit the requirement of local medical environment, epidemiology of neonatal mortality, and its cultural background in Solomon Islands. We hope to help more perinatal health providers to learn and pass the NRP protocol in order to reduce the neonatal mortality of Solomon Islands.

Acknowledgements

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