



THE IMPACT OF TRACHEOSTOMY WORKSHOP ON NURSES' KNOWLEDGE TOWARDS A BETTER QUALITY TRACHEOSTOMY CARE: A PRE AND POST TEST ANALYSIS

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Introduction:

Tracheostomy care remains one of the most important critical skills needed in the clinical management of patients. Initial surveys on nurses knowledge on tracheostomy care conducted in Changi General Hospital (CGH) showed an inconsistent level of knowledge and variations in clinical practice. These inconsistencies and variations pose enormous threat in the safety of patients especially now that tracheostomy patients are being nursed in non specialized areas like general wards. This may lead to infections, prolonged hospitalization, airway compromise and death.

Aim:

To explore the impact of tracheostomy workshop on nurses' knowledge on tracheostomy care. CGH conducts tracheostomy workshop twice a year with the aim of improving the knowledge and skills of nurses in caring for tracheostomy patients. With improved knowledge, an effective and better quality care can be rendered to tracheostomy patients. Early and proper management of risks and complications associated with tracheostomy will enhance positive outcomes and prevent adverse events on tracheostomy patients.

Method:

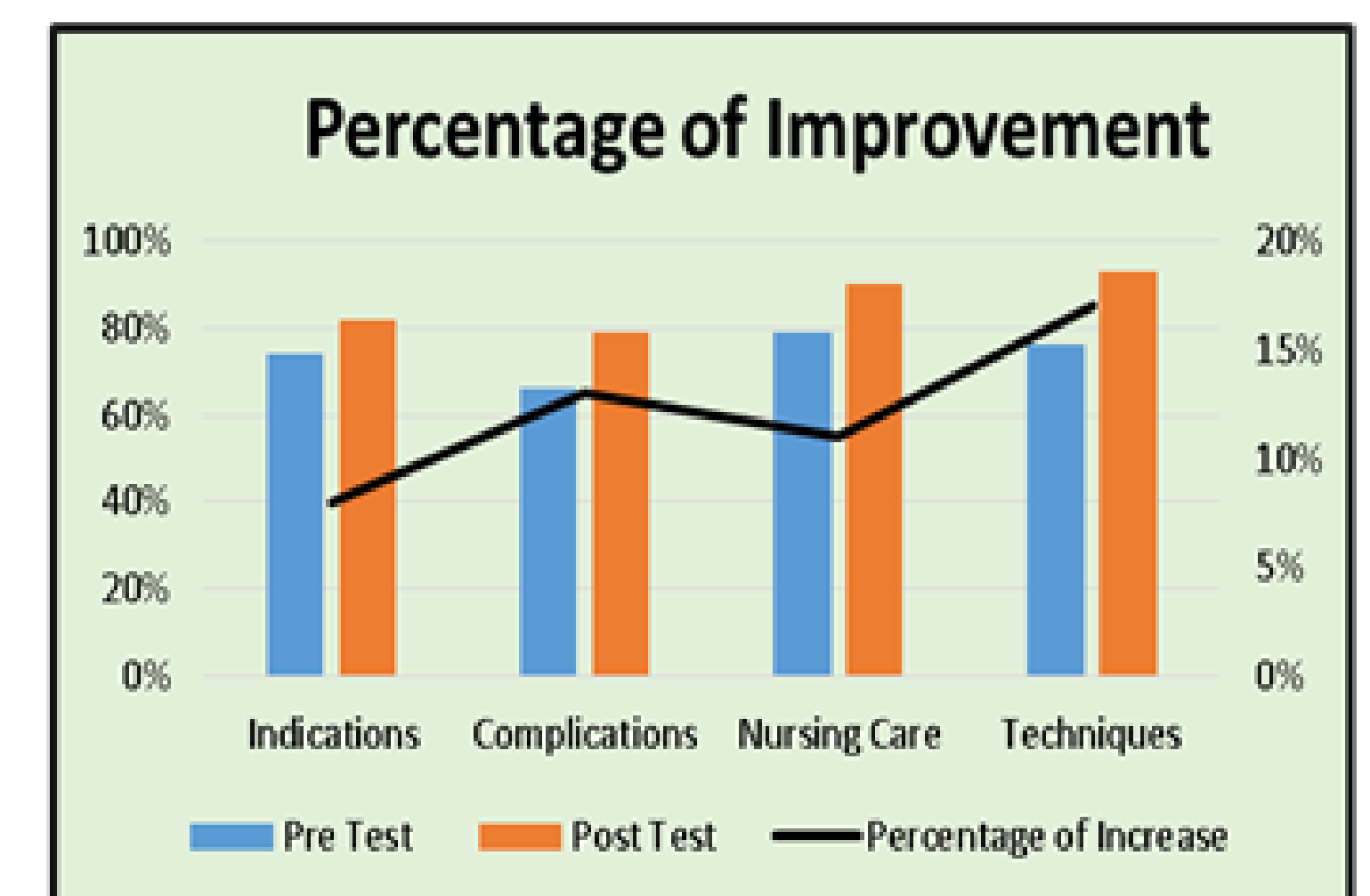
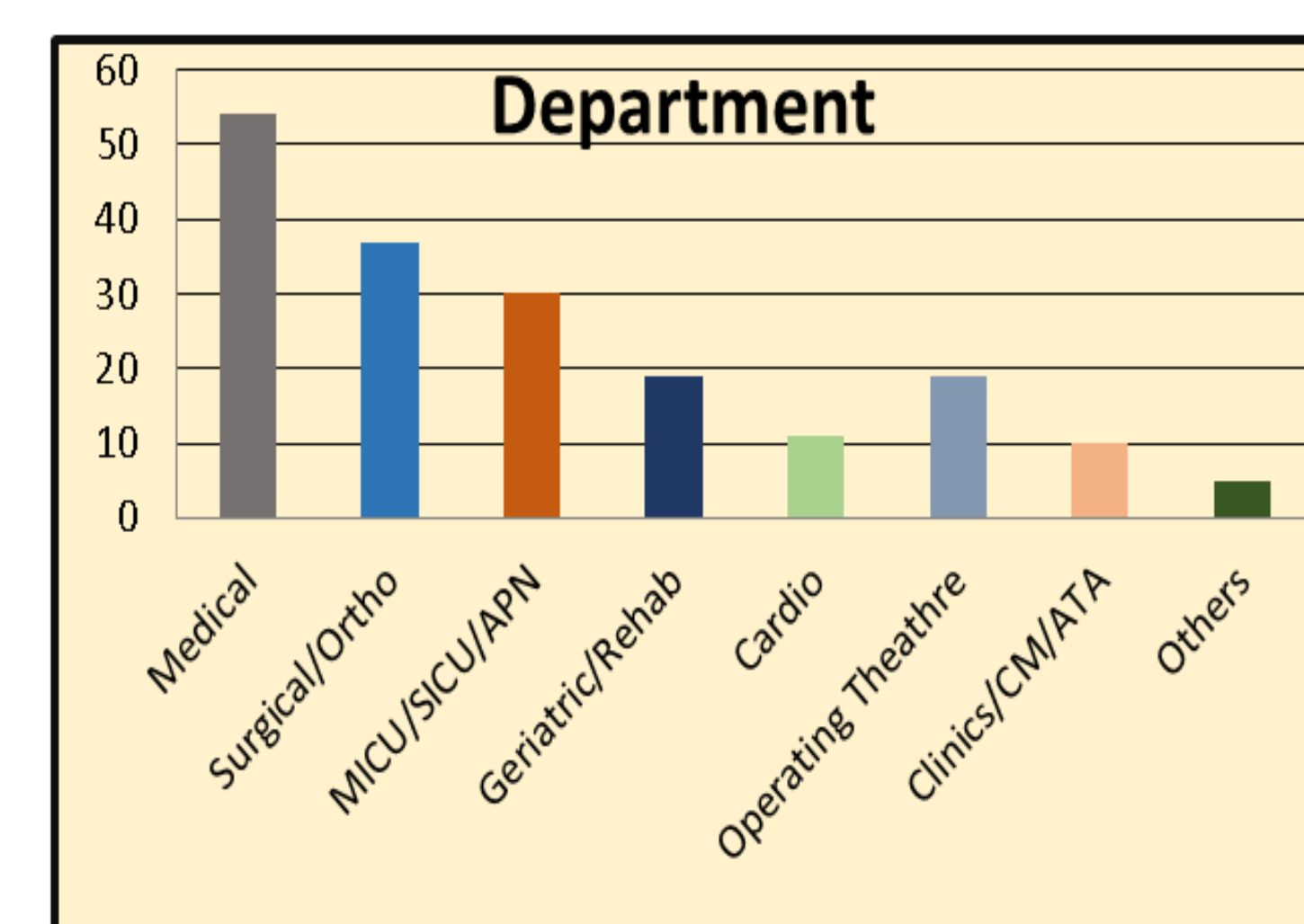
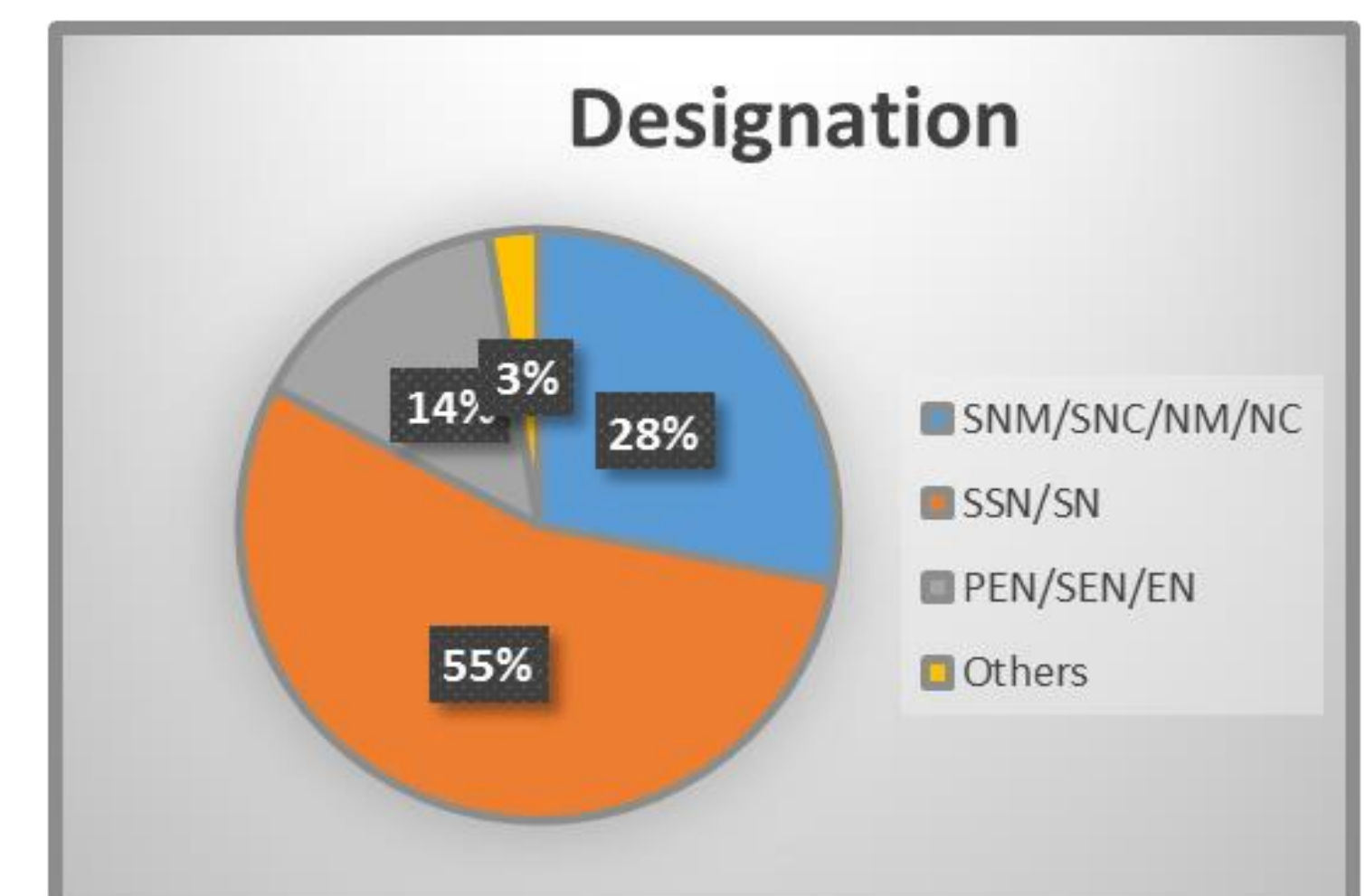
A prospective pre-test post-test study was conducted in four sessions. A tracheostomy workshop which comprised of topics on anatomy, indications, nursing care, types of tubes, complications, suctioning and dressing, etc. was offered to all nurse participants (n=185). After the lecture, participants were divided into sub- groups and were assigned for practical stations. Participants' knowledge on tracheostomy was collected pre and post workshop using the same set of 20 item questionnaire. The questions in the questionnaire were customized in four different aspects of tracheostomy care: indications, complications, nursing care and techniques.

Results:

A Paired sample t-test was used to measure the differences in participants' score during the pre and post tracheostomy workshop.

There was a significant increase ($t(182) = -16.846, p = .000$) in the scores from pre-test (M=14.86, SD =2.516) and post-test (M=17.68, SD =1.875) workshop. A large effect was represented using Eta squared (0.60).

Participants in all four categories showed a marked increase in the knowledge scores of participants after the post workshop, with 49% improvement in post test as compared with pre test.



Category	Pre Test	Post Test
Indications	3.8	4.18
Complications	3.32	3.91
Nursing Care	4.29	4.88
Techniques	3.39	4.11

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre Scores - Post Scores	-2.820	2.264	.167	-3.150	-2.489	-16.846	182	.000

Conclusion:

The tracheostomy workshop resulted in significant increase in nurses' knowledge on tracheostomy care. The findings of this study provided new insight into the role of tracheostomy education and care in increasing the knowledge of nurses which may generate positive outcomes and proper risk management. The significant increase in learning after tracheostomy workshop warrants an increase in the frequency of tracheostomy workshop sessions in the hospital for standardization of education and care. As more patients with tracheostomy are being discharged to general wards, it is important that nurses in non-specialized areas should also receive educational interventions/workshops to improve their knowledge, with patient safety as the ultimate outcome. Our results would assist in the direction of future researches that can also look into number of critical incidences after proper tracheostomy risk management.