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Effectiveness of Online Information Module Regarding Swallowing Exercises for Stroke Patients on Knowledge among the Nurses

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Abstract.

Background of the study: Half of the patients land up into the dysphagia following the stroke. Bedside exercise regimen has shown a dramatic change in the swallowing functionand demonstrated a practical secondary effect, such ashealthy state of mind and standard quality of life.The registered nurses are competent enough to assess the early screening of dysphagia, identify needs of the patient and comprehend understanding, expertised abilities, judgement and giving their best successfully at an desired level in treating dysphagia. Aim: The main aim of the study is to assess an efficiency of online information module regarding swallowing exercises for stroke patients on knowledge of nursing officers. Objectives: 1) To determine the pretest level of knowledge on swallowing exercises for stroke patients among the nursing officers.2)To find the effectiveness of online module on knowledge regarding swallowing exercises for stroke patients among the nursing officers.3)To find out the association between the pretest knowledge level regarding swallowing exercises for stroke patients and selected demographic variables of nursing officers. Methodology: Research approach: Quantitative research approach, Research design: Quasi-experimental (single group pretest and posttest design). sampling technique: Non probability Purposive sampling. Sample size: 40. Sampling Criteria: Inclusion criteria: Staff nurses who areworking as direct caregivers to the patients (bedside nurses), willing to participate, available at the time of study, having technological efficiency as the study is conducted online. Exclusion criteria: Staff nurses who have undergone previous training programme on swallowing exercises. Findings: The result showed that there was rise in mean of post test knowledge level scores (28.82) differentiating the mean pretest knowledge level scores (8.85) of nursing officers related to the swallowing exercises for stroke patients which established the effectiveness of online information module as evidence by t=32.9. There was scientificallynotable association ($p<0.05$) of the pre test knowledge level scores of nursing officers with their selective socio demographic variables of work experience only while other socio demographic variables were not in alliance with the pre test knowledge level scores. Thus, online information module is proven to be effective for nursing officers to reform knowledge and to improve the standards of nursing practice.

Key words: knowledge, swallowing exercises, online information module.

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INTRODUCTION AND BACKGROUND

Stroke, a neurological disorder occurs when there is sudden interruption in the blood supply to the brain partially or fullyor when there is a rupture of blood vessel in the brain and spills blood in the spaces surrounding blood cells. Brain death is seen when the cells are deprived of oxygen and nutrients from the blood or there is sudden hemorrhage in or around the brain. The stroke is manifested by facial or arm weakness , difficulty in speech,sudden confusion , numbness or weakness usually on any one side of the body;trouble seeing laterally or bilaterally, inability to i walk, dizziness , imbalanced coordination and gait; severe headache with unknown cause. If these symptoms are timely attended can reduce much of the potential disabilities of the stroke.[1]

Stroke worldwide contributes as a second leading cause of serious long term disability like reduced

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mobility and dysphagia.[2] According to WHO (2016), 70% of stroke and 87% of both stroke related mortalities and morbidities occur in lesser and moderate income countries.[3]

In human body, swallowing is controlled by swallowing reflex. Dysphagia refers to any disturbance in the swallowing. Itis a common symptom of stroke.Dysphagia, like any other chronic disorder, affects adversely quality of life. People with dysphagia goes throughsocial and psychological challenges along with physical swallowing disability. Health care professionals can attend the psychosocial as well as the physical concerns of dysphagia by considering an individual's perspective of need.

There is no pharmacological treatment for oropharyngeal dysphagia. The main management is rehabilitation. The goal of swallowing rehabilitation is to reestablish a safe oral feeding to as normal as possible. Exercise is acrucial aspect of preventive plan of action for many chronic illnessesincluding stroke.The best custom for recovery after stroke is substantial rehabilitation to decrease the initial footprint caused due to stroke, prevent complications, and improve functional status. [4]

According to the study by Veterans Hospital, Korea (2012), bedside swallowing exercises regimenproved to be an important tool instabilizing the swallowing ability and demonstrated a assertive secondary effect, such as healthy state of mind and standard of life, on dysphagic stroke survivals.[5]

According to the study conducted by College of Nursing, Shri Ramchandra University, Tamil Nadu, India (November 2015), dysphagia exercises were significantly effective in promoting swallowing ability.There has been an increase in identifying the importance of the effect of dysphagia exercise programs on swallowing ability over the last ten years.[6]

Swallowing therapy has a vigilant role in the convalescence of dysphagia, reduction in the incidents of aspiration, and upgrading the quality and standard of life. [7-8]

Nurses are frequently in contact with the patients and have ability to build trust, therapeutic interpersonal relationships, motivate patients to make the desired health behavior changes such as planned physical activity. A nurse has to assess and counsel patients on the benefits of physical activity. Nurses also have a great role in managing patient's meal time, documenting progress, teaching safe meal practices and monitoring the bedside exercise regimen.

The bedside exercise program for retrieving dysphagic state involves tongue, facial and neck movements, pharyngeal and laryngeal movements and respiratory exercises which can be appropriately selected on the basis of affected swallowing stage. For a prompt implementation of bedside swallowing exercises, rehabilitation therapists provide training to the nurses so that they can keep check on that.

Hence, the present study is focused to find out the effectiveness of online information module on swallowing exercises for stroke patients.

OBJECTIVES:

1) To determine the pretest knowledge level on swallowing exercises for stroke patients among the nursing officers.

2)To assess the effectiveness of online e-module on knowledge level related to swallowing exercises for stroke patients among the nursing officers.

3)To determine the association between the pretest knowledge level between swallowing exercises for stroke patients and sociodemographic variables of nursing officers.

MATERIAL AND METHODS:

A Pre-Experimental design with quantitative was used. 40 samples of nursing officers who worked as a bedside nurses were taken by Non-Probability purposive sampling technique. The tool was made in two sections; the first section included the demographic data like age group, sex, educational qualification, work experience & whether care given to stroke patients and assisted them for exercises. The second section included a knowledge based structured questionnaire. The knowledge based structured questionnaire consisted of 30 questions; the participants answered and the researcher marked the answer. After the pre-intervention knowledge level assessment, the online information module on swallowing exercises for stroke patients was introduced followed by the post test after 3 days using the same knowledge assessment tool. The scoring embodied; if the score is between 0-10 then the participant is said to have poor knowledge, if the score is between 11-20 the knowledge is average, Good knowledge

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suggested that the score is between 21-30.Experts validated the tool, the reliability was assessed using Pearson Correlation Coefficient method, and the correlation coefficient was found to be 0.86.

FINDINGS

A) SECTION I

Findings related to the distribution of the subjects according to their selected sociodemographic variables.

Table -1: Frequency and percentage wise distribution of the socio demographic variables of nursing officers.

N=40

Sr.No.	Sociodemographic variables	Freq.	Percent distribution
1.	**Age (in years)**		
	a) 20-25	19	47.5%
	b) 26-30	16	40.0%
	c) 31-35	05	12.5%
	d) Above 36	00	00.0%
2.	**Gender**		
	a) Male	20	50.0%
	b) Female	20	50.0%
3.	**Educational Qualification**		
	a) R.G.N.M	04	10.0%
	b) B.Sc nursing	33	82.5%
	c) M.Sc nursing	03	7.5%
4.	**Work experience**		
	a) Less than 1 year	11	27.5%
	b) 1 year to 3	19	47.5%
	c) 3 year to 5	09	22.5%
	d) Above 5	01	2.5%
5	**Care given to stroke patients and assisted them for exercises**		
	a) Yes	10	25.0%
	b) No	10	25.0%
	c) Worked with stroke patients but not assisted them for exercises	20	50.0%

The results showed that out of 40 nursing officers maximum number of them i.e. 19 were in the age between 20 to 25 years. Both male and female nurses equally participated in the study. Moreover, 82.5% of the samples were undergraduates and maximum number 47.5% of the total samples had worked for 1 to 3 years as a bedside nurse and only 2.5% had experience more than 5 years. Half of them have worked with the stroke patients but they have never assisted them in providing exercises.

B) SECTION II

Findings of preinterventional and postinterventional knowledge level score and their differences with the swallowing exercises for stroke patients among the nursing officers.

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Table 2: Frequency and percentage wise distribution of nursing officers as per the pretest and posttest knowledge level score regarding swallowing exercises for stroke patients.

N=40

Knowledge level scores	**Range**	**Pretest**		**Postest**	
		Freq.	**%**	**Freq.**	**%**
Poor	0-10	28	70.0%	00	00.0%
Average	11-20	12	30.0%	01	2.5%
Good	20-30	00	00.0%	39	97.5%
Total		40	100.0%	40	100.0%

Table -3: Comparisons of preinterventional and postinterventionalMean of knowledge level scores

N=40

Pretest	**Postest**	**T value**	**P value**
Mean ± SD	Mean ± SD		
8.85 ± 3.541	28.82 ± 2.086	32.9	P<0.05

Above table depicts that the knowledge regarding swallowing exercises for stroke patients pretest mean (8.85) is less as of post test mean (28.82). The data in Table 3. -represents that the calculated paired‘t’ value is (t=32.9). Hence, H1 is accepted. This proves that the gain in knowledge level score is statistically notable at p < o.o5 levels. Therefore, the Online Information Module regarding swallowing exercises for stroke patients is said to be effective in enhancing the knowledge of nursing officers.

C) SECTION III:

Finding related to the association of pretest knowledge scores regarding the swallowing exercises for the stroke patients with the socio demographic variable.

Table 4: An association of Pretest knowledge level scores among the nursing officers related to swallowing exercises for stroke patients with their demographic variables

Variables	Level of knowledge						Total	Chi-square	df	P value
	Poor		Average		Good					
	Freq	%	Freq	%	Freq	%				
AGE (in years)								0.1732	1	0.6773 Not significant association
20- 25	12	30%	06	15%	00	0%	18			
25-30	13	32.5%	04	10%	00	0%	17			
30-35	03	7.5%	02	5%	00	0%	05			
Above 35	00	0%	00	0%	00	0%	00			
GENDER										
Male	15	37.5%	05	12.5%	00	0%	20	0.4762	1	0.4902 Not

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Female	13	32.5%	07	17.5%	00	0%	20			significant association
EDUCATIONAL QUALIFICATION										
R.GNM	04	10%	00	0%	00	0%	04	0.977	1	0.3179 Not significant association
B.Sc nursing	22	55%	11	27.5%	00	0%	33			
M.Sc nursing	02	5%	01	2.5%	00	0%	03			
WORK EXPERIENCE										
<1 year	09	22.5%	03	7.5%	00	0%	12	7.877	2	**0.0195 * Significant association**
1-3 years	12	30%	06	15%	00	0%	18			
3-5 years	02	5%	07	17.5%	00	0%	09			
Above 5 years	00	0%	01	2.5%	00	0%	01			
CARE GIVEN TO STROKE PATIENTS & ASSISTED THEM FOR EXERCISES										
Yes	07	17.5%	03	7.5%	00	0%	10	0.349	2	0.8458 Not significant association
No	07	17.5%	04	10%	00	0%	11			
Care given but not assisted for exercises	14	35%	05	12.5%	00	0%	19			

The above table depicts that there is significant association between only**work experience** of the subjects and level of pretest knowledge regarding swallowing exercises for stroke patients at $p < 0.05$ level of significance.

CONCLUSION

Conclusions of this study stated that online information module is proven to be effective for nursing officers to reform knowledge and to improve the standards of nursing practice, so that the nurses can do evidence based and empirical practice to minimize the possibilities of incidents of complications. There should be involvement of nurses in bedside exercise regimen in managing the rehabilitative phase of post stroke patients. If it is practically not feasible to conductperiodical CNE, workshops, seminars etc. due to heavy task in the patient care then at least Online Information Modules or manuals can be made accessible for nurses to improve their knowledge.

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Nil

References

1. Bamford J., Sandercock P., Dennis M., Burn J., Warlow C. Classification and natural history of clinical identifiable subtypes of cerebral infarction. *The Lancet*. 1991;337(8756):1521–1526. doi: 10.1016/0140-6736(91)93206-o. [PubMed] [CrossRef] [Google Scholar]
2. Global Health Estimates. Geneva: World Health Organization; 2012. Available from: http://www.who.int/healthinfo/global_burden_disease/en/ [cited 2016 June 1].
3. Feigin VL, Forouzanfar MH, Krishnamurthi R, Mensah GA, Connor M, Bennett DA, et al.; Global Burden of Diseases, Injuries, and Risk Factors Study 2010 (GBD 2010) and the GBD Stroke Experts Group. Global and regional burden of stroke during 1990-2010: findings from the Global Burden of Disease Study 2010. Lancet. 2014 Jan 18;383(9913):245–54. http://dx.doi.org/10.1016/S0140-6736(13)61953-4 pmid: 24449944.
4. Langhorne P, Sandercock P, Prasad K. Evidence-based practice for stroke. Lancet Neurol. 2009;8:308–9. [PubMed] [Google Scholar]
5. Cook IJ, Dodds WJ, Dantas RO, et al. Opening mechanisms of the human upper esophageal sphincter. Am J Physiol 1989;257:G748–59
6. D. Maria Diana,S.S Sharmila Jansi Rani. A study to assess the Effectiveness of Swallowing exercises on Swallowing Ability among Patients with Cerebrovascular Accident in selected Hospitals. Asian J. Nur. Edu. and Research 4(4): Oct.- Dec., 2014; Page 429-435.
7. Brotherton A. M., Judd P. A. Quality of life in adult enteral tube feeding patients. *Journal of Human Nutrition and Dietetics*. 2007;20(6):513–522. doi: 10.1111/j.1365-277X.2007.00827.x. [PubMed] [CrossRef] [Google Scholar]
8. Vesey S. Dysphagia and quality of life. *British Journal of Community Nursing*. 2013;18(Sup5):S14–S19. doi: 10.12968/bjcn.2013.18.Sup5.S14. [PubMed] [CrossRef] [Google Scholar]
9. D. Maria Diana,S.S Sharmila Jansi Rani. A study to assess the Effectiveness of Swallowing exercises on Swallowing Ability among Patients with Cerebrovascular Accident in selected Hospitals. Asian J. Nur. Edu. and Research 4(4): Oct.- Dec., 2014; Page 429-435
10. Logemann J. Textbook of evaluation and treatment of swallowing disorder, Tokyo.2006
11. Albini RMN, Soares VMN, Wolf AE, Gonçalves CGO. Knowledge of Nursing Professionals about the Care to Dysphagic Patients in Intensive Care Units. CEFAC 2013; 15(6): 1512-24. [http://dx.doi.org/10.1590/S1516-18462013005000047]