International Journal of Multidisciplinary Education and Research
ISSN: 2455-4588; Impact Factor: RJIF 5.12
www.educationjournal.in
Volume 1; Issue 10; December 2016; Page No. 05-07

Effect of a planned teaching programme on knowledge regarding thyroid function test in neonates, among staff nurses in selected hospitals at ernakulam District, Kerala

Jomcy P Jose, Sajeena SD

Jomcy P. Jose, Lecturer, MOS College of Nursing, Kolenchery, Ernakulam, Kerala, India
Professor, Samaritan College of Nursing, Pazhanganad, Kizhakkambalam, Ernakulam (Dt)., Kerala, India

1. Introduction

Becoming a mother is one of the most exciting times in a woman's life. Discovering that a women is pregnant can be one of the most uplifting and momentous times in a couples' life. Pondering the thought of having a boy, girl or may be twins or triplets can make for hundreds of dream filled nights. The birth of a baby is a significant life event influenced by cultural norms and expectations. Every parent wants to bring a healthy baby into the world. Nurses responsible for newborn care need to balance the expectations of the new mother and her family with astute assessment and timely interventions. Congenital thyroid disorders are common among all endocrine diseases in worldwide. Among endocrine disorders most commonly encountered in the pediatric age group, disorders of the thyroid gland are most frequent with hypothyroidism being the commonest.2 The annual birth rate is 21.76 births/1,000 population in India and in Delhi alone nearly 900 births take place every day; considering this figure there would be one or two babies born in Delhi alone with a metabolic defect each day. However, the diagnosis is delayed due to lack of awareness among the professionals and of easily accessible technical expertise. Newborn screening aims at the earliest possible recognition of disorders to prevent the most serious consequences by timely intervention.

According to a projection from various studies on thyroid disease, it has been estimated that about 42 million people in India suffer from thyroid diseases. Early diagnosis and treatment remains the cornerstone of management. Studies from Mumbai have suggested that congenital hypothyroidism is common in India, the disease occurring in 1 out of 2640 neonates, when compared with the worldwide average value of 1 in 3800 subjects. There is often a delay in the diagnosis of congenital hypothyroidism in the country. The diagnosis is delayed due to lack of awareness among the professionals and of easily accessible technical expertise. Early diagnosis of congenital thyroid disorders is dependent on proper timing and collection of blood samples and an efficient screening program reporting accurate results. A thorough maternal and family history in conjunction with clinical signs and symptoms of hypothyroidism, biochemical tests, and radiological findings should be used to rapidly establish the diagnosis. Early detection and treatment with thyroxine normalizes skeletal maturation, physical growth, cognitive functioning, and motor development of affected newborns. Nurses play an important role in identification, management, and supportive care of neonates with thyroid disorders. So that maximal potential is achieved.

2. Objectives

Objectives of the study are to:

- Assess the knowledge of staff nurses regarding Thyroid Function Test in neonates in both experimental and control group.
- Determine the effect of Planned Teaching Programme on knowledge of the staff nurses regarding Thyroid Function Test in neonates.
- Find the association between pretest knowledge score of the staff nurses regarding Thyroid Function Test in neonates and the selected demographic variables.

3. Methodology

Setting of the study : Vijayalakshmi Hospital and Baselious Hospital Kothamangalam
Research approach : Quantitative approach
Research design : Quasi experimental: Non equivalent control group design
Sample : 60
Sampling technique : Non probability convenient sampling
Data collection instrument : Structured knowledge questionnaire

3.1 Data Collection

The study was conducted after obtaining permission from the authorities, during the period between 17-02-2014 to 25-02-2014. 30 sample were selected conveniently from Vijaya Lakshmi hospital, Ernakulam for the experimental group and 30 sample were selected conveniently from Baselious Hospital Kothamangalam for the control group. In the experimental group on 1st day after introducing self and purpose of the study, written consent was obtained assuring maximum anonymity and confidentiality. Pretest conducted to assess the knowledge of staff nurses regarding Thyroid Function Test in neonates by using knowledge questionnaire. The Planned Teaching Programme conducted on the same day after pretest for about one hour using power point presentation. The posttest to assess the effect of Planned Teaching Programme was conducted using same tool on 7th day after Planned Teaching Programme. In the control group on 2nd day after introducing self and purpose of the study, written consent was obtained assuring maximum anonymity and confidentiality. Pretest was conducted using the same tool and posttest conducted using the same questionnaire after 7 days. At the end respondents were thanked for their co-

operation. The investigator didn't have any problems during the data collection process.

3.2 Data Analysis

Organization of study findings

The analysis and interpretation of data have been organized and presented under the following sections:

Section 1: Description of demographic variables of nurses

Section 2: Knowledge of nurses regarding Thyroid Function Test in neonates in both experimental and control group.

Section 3: Effect of Planned Teaching Programme on knowledge of nurses regarding Thyroid Function Test in neonates in both experimental and control group.

Section 4: Association between pretest knowledge score of the staff nurses regarding. Thyroid Function Test in neonates and the selected demographic variables.

Section 1: Description of sample characteristics

Table 1: Demographic profile of the respondents

Demographic variable		Control Group		Experimental group	
		f	%	f	%
Age in years	21 – 30	11	36.67	19	63.34
	31 - 40	5	16.67	8	26.67
	41 – 50	7	23.34	2	6.67
	< 50	7	23.34	1	3.34
Gender	Male	-	-	-	-
	Female	30	100	30	100
Educational status	GNM	16	53.34	22	73.34
	B.Sc	14	46.67	8	26-67
Years of working experience	0 – 1 year	3	10	3	10
	1 – 2 year	6	20	7	23.34
	2– 5 year	2	6.67	8	26.67
	>5 year	19	63.34	12	40
Area of work	Pediatric	10	33.33	4	13.34
	Maternity	10	33.33	15	50
	NICU	10	33.33	11	36.67
Previous information	Yes	-	-	-	-
	no	30	50	30	50

Table 1 depicted that distribution of sample in relation to their age reveals majority of the sample in the control group 11(36.67%) and the experimental group 19(63.34%) were in the age group of 21-30years.Distribution of sample in relation to their gender revealed that 100% of the samples belonged to female. The majority of the sample in the control group 16(53.34%) belonged to GNM and the experimental group were 22(73.34%) belonged to B.Sc and majority of the sample in the control group 19(63.34%) and the experimental group 12 (40%) were having experience between >5 years. The sample had no previous information in both control group and experimental group related to importance of Thyroid Function Test in neonates.

Section 2: Knowledge of nurses regarding Thyroid Function Test in neonates in both experimental and control group

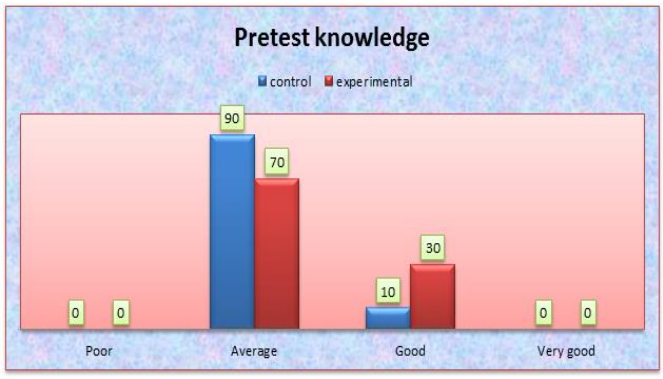

Fig 1

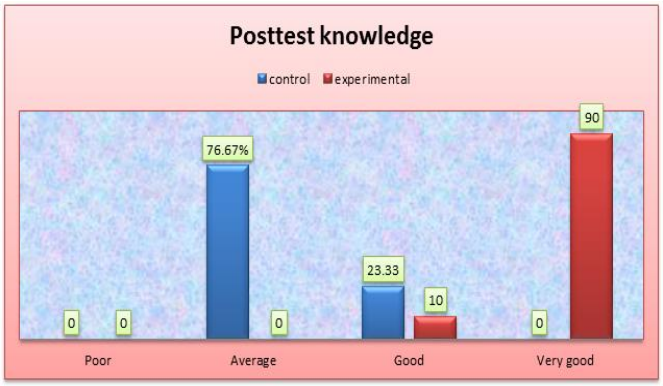

Fig 2

Table 2: Mean, Mean difference and t value of the pretest knowledge score of control and experimental group (N = 60)

Group		Mean	Mean difference	t value	p value
Control	pretest	17.23			
			-1.467	1.553	0.126
Experimental	pretest	18.70			

Significance level at 0.05

The mean pre test knowledge score (17.23) of control group was lower than the knowledge score (18.70) of experimental group. The pretest knowledge score of experimental group and control group found not to be significant, both the experimental and control group are homogenous.

Table 3: Effect of Planned Teaching Programme on knowledge of staff nurses regarding Thyroid Function Test in neonates in both experimental and control group. (N = 60)

Control group			Experimental group		't' value
Posttest	Mean	SD	Mean	SD	
	18.60	3.820	34.56	2.674	18.755*

*Significance level at 0.05

The mean post test knowledge score (18.60) of control group was lower than the knowledge score (34.56) of experimental group. The calculated t value (t= 18.755) was greater than the t table value (t= 2.00). Hence the null hypothesis (H_{01}) at 5% level of significance is rejected and the research hypothesis (H_1) is accepted. This showed that there was significant improvement in the knowledge score of nurses after the Planned Teaching Programm

4. Conclusion

From the study it is clearly evident that Planned Teaching Programme on Thyroid Function Test in neonates help the staff nurses to improve their knowledge and thereby able to decrease their errors in the nursing pract ice. The professional practice of nursing within the pediatric environment can be both rewarding and challenging. Pediatric nurses‟ activities are complicated and require constant vigilance in providing quality care to the patient. The nurses get limited time to upgrade their knowledge and skills with current advancement in technology. Early detection and treatment with thyroid disorders normalizes skeletal maturation, physical growth, cognitive functioning, and motor development of affected newborns. Nurses play an important role in identification, management, and supportive care of neonates with thyroid disorders. Nurses dispense comfort, compassion, and caring without even a prescription. The researcher felt deep sense of satisfaction and fulfillment for having undertaken the study.

4.1 Recommendations

- The study can be replicated on a larger sample to generalize the findings.
- This study can be conducted as a true experimental study.
- Follow up study can be conducted to evaluate the long term effect of the administration of Planned Teaching Programme and to find out the necessity of reinforcement.
- This study can be conducted testing self-instructional module on knowledge of staff nurses regarding the importance of Thyroid Function Test in neonates.

5. References

1. Desai MP. Thyroid function in children. Supplement to JAPI. 2011, (59).
2. Kapoor S, Kabra M. Newborn Screening in India: Current Perspectives: The Functional Element [Internet]. Available from: http://indianpediatrics. net/mar 2010/ mar-219224.htm.
3. Desai MP. Management of neonatal and childhood hypothyroidism. Indian journal of practical pediatrics. 2005; 7(1):47
4. Virmani A. Thyroid dysfunction and management. Indian journal of practical pedatrcs. 2011; 13(4):361.
5. Seth A, Maheshwari A. Common endocrine problems in India. Indian journal of pediatrics. 2013; 80(8):681-687.
6. Srivasthav J, Jain S. Preliminary report on neonatal screening for congenital hypothyroidism, congenital adrenal hyperplasia, and glucose 6 phosphate dehydrogenous deficiency: a chandigargh experience. Indian jouranal of pediatrics. 2010; 77:969-973.
7. Rose SR, Brown RS. Update of Newborn Screening and Therapy for Congenital Hypothyroidism. Pediatrics. 2006; 117(6):2290-303.