ORIGINAL ARTICLE

Effectiveness of an Educational Program on Nurses' Knowledge concerning Early Detection of Hypothyroidism/ Hyperthyroidism in Baghdad Teaching Hospitals

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ABSTRACT

Background: Hypothyroidism and Hyperthyroidism has different causes, singes and symptom, and expected treatments. Appropriate therapy needs an accurate diagnosis and is affected by coexisting medical conditions and patient preference**.**
Aim: Effectiveness of an educational program on nurses' knowledge concerning early detection of hypothyroidism/ hyperthyroidism in Baghdad Teaching Hospitals and to find out a relationship between nurses knowledge with demographic variables.
Methodology: Quasi-experimental design Non-equivalent Control Group Design was conducted in the period of October 2019 to March 2021. The sample consisted of (60) nurses who were systematically selected one by one. The data collected was analyzed using SPSS version 22.0.
Results: The majority of the sample was female for study and control groups, (30.0% and 36.3%) respectively at age group (20-25,26-30) for study group and (26-30) for the control group. Regarding marital status both study and control groups have the highest percentage of married participants (60.0%, 53.3%). The half (50%) of study group's participants were graduated from diploma education level also high percentage (50.0%) of the control group was graduated from nursing school education level. The high percent of both groups were experience of years for study and control groups (65.6 %, 63.3%). Regarding training course both study and control groups have the highest percentage of training (83.3%, 70.0%).
Conclusions: Findings of study demonstrate that, a highly significant difference was found between the study group nurses pre and post application of the educational program.
Keywords: Knowledge, early detection, nurses, Hypothyroidism, Hyperthyroidism

INTRODUCTION

The thyroid disease is most clinical problem. Since the guidelines for the management principles, this problem was initially distributed by the American Thyroid Association (ATA) in 2011, and it's significant there were clinical and scientific developments in this area [1].Hypothyroidism results from low levels of thyroid hormone with changed etiology and signs. Untreated hypothyroidism increases morbidity and mortality. In the United States, Hashimoto thyroiditis is the most common etiology of hypothyroidism, but globally lack of iodine in the diet is the most common cause. The patient presentation can vary from asymptomatic disease to myxedema coma. The early diagnosis of hypothyroidism is easily made with simple blood tests and can be treated with exogenous thyroid hormone[2]. Hyperthyroidism is a hypermetabolic condition due to abnormal thyroid gland function leading to overproduction and overexpression of thyroid hormone. The prevalence of hyperthyroid during pregnancy is 0.1-0.4%, and 85% of case presented as grave's disease [3].The prevalence of spontaneous hypothyroidism is between 1 and 2%, and it's more common in older women and ten times more common in women than in men. The prevalence of hyperthyroidism in women is between 0.5 and 2% and is ten times more common in women than in men [4].The early detection of hypothyroidism and hyperthyroidism are dependent on clinical history, physical examination and serum level of FT3, FT4, and thyroid-stimulating hormone, imaging studies, procedures, and histological findings [5].There are extremely determined studies present on the awareness about their diseases of the patients themselves. We believe that that there's requirement for more awareness of thyroid diseases, which is an essential public health concern, affecting all parts of the community [6].

MATERIALS AND METHODS

Quasi-experimental design: Effectiveness of an educational program on nurses' knowledge concerning early detection for hypothyroidism/hyperthyroidism in Baghdad Teaching Hospitals. This study was conducted at Baghdad Teaching Hospitals between October 2019 to March 2021. A tool of knowledge questionnaire was developed and distributed to the participants in this study. The sample consisted of (60) nurses at Baghdad Teaching Hospitals. A questionnaire- interview format was designed and developed by the researcher for the purpose of the study; such development was employed through the available literature, clinical background and interview with nurses. All the items were measured on scale of (2) indicates that the know 2; don't know 1.The questionnaire consisted of (2) parts. Part I: Demographic Information Sheet. Part II: Nurses' knowledge sheet concerning early detection for hypothyroidism/hyperthyroidism. Rating scale was used to rate the frequency and extension of the problems. The content validity of the instrument was established through a panel of (10)

experts. Test- retest reliability was determined through a computation of person correlations for the scales. The data were collected by using the questionnaire structured format through interview and inspection technique. The determination was conducted during the period from 9 January 2020 to 15th March 2020.The data were analyzed through descriptive data analysis and inferential data analysis the data were analyzed through the use of SPSS version (22).

RESULTS

Table 1 shows that majority of the sample was female for study and control groups, (30.0% and 36.3%) respectively at age group (20-25,26-30) for study group and (26-30) for the control group. Regarding marital status both study and control groups have the highest percentage of married participants (60.0%, 53.3%). The half (50%) of study group's participants were graduated from diploma education level also high percentage (50.0%) of the control group was graduated from nursing school education level. The high percent of both groups were experience years for study and control groups (65.6 %, 63.3%) respectively. Regarding training course both study and control groups have the highest percentage of training (83.3%, 70%) respectively.

Table 2 indicates that highly significant differences between before and post-test periods of study sample regarding specific knowledge areas after applying the educational program at p value ≤ 0.01. Also, there are no significant differences between pre-test and post-test periods of control sample regarding specific knowledge areas after applying the educational program at p value ≤ 0.05.

Table 3 indicates that the relationship between demographic and knowledge levels after applying the educational program. The findings displayed non-significant association between socio-demographic with nurses knowledge domains at p value ≤ 0.05.

Table 1: Distribution and Comparison of the Samples by Socio-Demographic Features of the Study and Control Groups

NO.	Demographic Variables	Study Group (n=30)			Control group (n= 30)	
		Groups	F.*	%	F.	%
1.	Gender	Male	5	16.7	10	33.3
		Female	25	83.3	20	63.7
2.	Age	20-25	9	30.0	10	33.3
		26-30	9	30.0	11	36.3
		31-35	4	13.3	3	10.0
		36-40	3	10.0	2	6.7
		≥ 41	5	16.7	4	13.3
3.	Educational level	Nursing school	10	33.3	15	50.0
		Diploma	15	50.0	11	36.7
		College	5	16.7	4	13.3
4.	Marital status	Single	9	30.0	14	46.7
		Married	18	60.0	16	53.3
		Absolute	3	10.0	0	00.0
5.	Experience of years	1-5	17	56.7	19	63.3
		6-10	9	30.0	6	20.0
		11-15	1	3.3	2	6.7
		>16	3	10.0	3	10.0
6.	Training course	Yes	25	83.3	21	70.0
		No	5	16.7	9	30.0

Table 2: Comparison of Areas of Knowledge toward Early detection of Hypo/Hyperthyroidism between Pre-test and Post-test Period for Study and Control group.

Area of knowledge	Group	Pre-test (n=30)		Post-test (n=30)		Paired t Test statistics		
		M.S	SD	M.S	SD	T test value	Df	Sig.
Pathophysiology of the disease	St	8.50	1.10	10.40	1.10	8. 784	29	0.000 HS
	Co	9.30	1.44	9.47	1.35	0.796	29	0.433 NS
Causes of the disease	St	6.30	0.95	8.37	1.12	9. 906	29	0.000 HS
	Co	6.73	1.28	6.83	1.08	0.516	29	0.610 NS
Singes and symptom	St	8.50	1.13	10.27	1.25	6.880	29	0.000 HS
	Co	8.60	1.32	9.13	1.38	2.237	29	0.033 NS
Diagnosis	St	5.43	0.89	6.60	1.00	5.887	29	0.000 HS
	Co	5.70	1.26	5.80	0.99	0.648	29	0.522 NS
10.Treatment	St	3.97	0.85	5.20	0.80	5.524	29	0.001 HS
	Co	4.07	1.04	4.37	.99	2.068	29	0.048 NS

St= study group, Co= control group,*M.S. = Mean of score, SD=Standard deviation, DF=degree of freedom, sig. =level of significance, HS= highly significant, NS = non-significant

Table 3: Association between Socio-Demographic and Level of Nurses' Knowledge and Attitudes toward Early Detection of Hypo/Hyperthyroidism.

Socio-demographic variables	Knowledge level		
	Contingency Coefficients	P value	Sig.*
Gender	0.642	0.073	NS
Age groups	0.805	0.356	NS
Marital status	0.649	0.696	NS
Educational level	0.638	0.765	NS
Experience of years	0.714	0.808	NS
Training course	0.585	0.271	NS

* Sig. = significance level ≤ 0.05= significant

DISCUSSION

Through the course of the data analysis of the present study the finding showed that majority of the sample was female for study and control groups, (30.0% and 36.3%) respectively at age group (20-25,26-30) for study group and (26-30) for the control group. Regarding marital status both study and control groups have the highest percentage of married participants (60.0%, 53.3%). The half (50%) of study group's participants were graduated from diploma education level also high percentage (50.0%) of the control group was graduated from nursing school education level.

These results are agreement with the findings obtained from other study, who shows who reported that in their study more than half of studied nurses their ages ranged from 20 to 30 years, and most of sample were female [7]. The levels of education (65.1%) from nurses were diploma and only (34.9%), was Baccalaureate [8]. A high percentage of samples were married for control and case groups their percentages were respectively 56.7% and 60.0 % [9].

Regarding experience years, the high percent of both groups were experience years for study and control groups (65.6 %, 63.3%) respectively. Regarding training course both study and control groups have the highest percentage of training (83.3%, 70.0%) respectively.

These results are accordance with findings obtained from other study, shows that that study group (50%) and (33.3%) in the control group were years of working (1-5 years) [9]. They reported that 62.9% nurses have no training course, and 100% have training course in Iraq [10].

The result of accurate study that show early detection of hypothyroidism/hyperthyroidism domain in table (2) for nurses knowledge that there are highly significant mean differences between pre –test and post-test periods of the study group at p value ≤ 0.01 related to Specific knowledge areas which are (Pathophysiology, causes, signs and symptoms of the disease, Diagnosis and treatment). Also, there are no significant differences between pre-test and post-test periods of control sample regarding specific knowledge areas after applying the educational program at p value ≤ 0.05.

The findings of the study agree with result obtained from other study who reported that no statistically significant difference between the study & control groups regarding their knowledge level pre implementation of the nursing teaching instructions, while a highly statistically significant difference was found between the study group patients pre and post application of the nursing teaching instructions [11].

Age ,gender,martial statues , Level of education ,experience of year ,and training coures of nursing in hospitals in comparison of the respondent's total Nurses knowledge domain in table (3) ,there is non-significant association between socio-demographic with nurses knowledge domains at p value ≤ 0.05.

This result of study are agree with other studies done by other researchers whose reported that there was no correlation between nurse's knowledge and gender , educational level at equally intervals (pre-tests and post tests) at p value >0.05[9].

Other study show that no significant relationship between health problems with (residence [-.058] and level of educational [.062]), at Bagdad city in Iraq concerning health problems for patients with hypothyroidism[12].

CONCLUSIONS

This study demonstrates that, a highly significant difference was found between the study group nurses pre and post application of the educational program.

RECOMMENDATIONS

Conducting future interventional studies with randomized controlled trial design, focusing on behaviours and practices of early detection of hypothyroidism/hyperthyroidism.

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