Nurses' knowledge, attitude and practice regarding Patients undergoing thyroidectomy

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Abstract: **Thyroidectomy Complications are uncommon, but their effects can often be serious. The nurse plays a pivotal role in facing the wide-ranging needs of the patient, increasing patient's self-belief to cope with surgery, increasing patient's satisfaction and faster recovery that helping patients back to normal life activities. Aim of the study: Assess nurses' knowledge, attitude and practice regarding Patients undergoing thyroidectomy. Design: A descriptive research design Subjects and method: The study was carried out at surgery departments at Alexandria University Hospital Egypt. Three tools were used for data collection. Tool I: Nurses' Knowledge Assessment Questionnaire for thyroidectomy. Tool II: Nurses' Practice Observational checklist. Tool III: Nurses' Attitude regarding Patients undergoing thyroidectomy Results: The overall knowledge of studied nurse's percent score were59.05 ± 8.91 with total score 12.40 ± 1.87, the overall practice of studied nurse's percent score were56.10 ± 6.01 with total score 31.42 ± 3.37, 69.58 ± 19.17 whatever the results show that percent score of studied nurses was 69.58 ± 19.17 and total score 19.13 ± 3.07Also, there was no significance correlation between the studied nurse's knowledge attitude and practice related to thyroidectomy (p=0.638, 0.213, 0.721) respectively. There were a significance relation between nurse's knowledge, practice and socio-demographic characteristic and only significance relation between attitude with age, level of education, nurses' years of experience. Conclusion: Nurses showed had moderate level of knowledge, practice and high level of attitude regarding care of patients undergoing thyroidectomy. Recommendation Nurses in need for in-services training programs and refreshing courses to improve their knowledge which will reflect into their performance while working with patients.**

Keywords: **Thyroidectomy, Nurses' knowledge, Attitude, practice.**

1. INTRODUCTION

Thyroidectomy defines as a surgical procedure aim to remove all or piece of the thyroid gland depending on the reason for surgery. It is point toward treat patients with thyroid cancer, thyrotoxicosis, Graves'disease, and goiter. Thyroidectomy Complications are uncommon, but their effects can often be serious (Genovese, Noureldine, Gleeson, Tufano, &Kandil, 2013; Liu, Masterson, Fish, Jani, &Chatterjee, 2015).

Postoperative complications include airway obstruction, bleeding, infection of the wound, laryngeal nerve injury. Uncommon complication as hypothyroidism, hypo-parathyroidism . They could affect patient's outcomes.) . Therefore, early identification with urgent care is the important point to cope these complications. So, it stays the nurse's job to evaluate the patient for potential or real complications following surgical treatment (Lewis et al., 2016; Memon, Junejo & Balouch, 2012,Ending et al, 2014 Mohamed, & Ahmed 2016).

Haq et al., (2013), described that giving patients confirmed information would improve patients' compliance concerning their treatment and keep away from further postoperative complications. Jiang et al., (2014) in their study "Perioperative nursing and intervention of postoperative complications for thyroidectomy," reported that dyspnea recovery after

operation could be improved if the patients were known complete preoperative assessment and preparation, received meticulous postoperative nursing care, health education, and close observation.

Nursing care should face the wide-ranging needs of the patient, increasing patient's self-belief to cope with surgery, increasing patient's satisfaction and faster recovery helping back to normal life activities (Chen et al 2011). The nurse plays a pivotal role in preparing patient physically and psychologically preoperatively through replying patient's questions that reducing terrors toward the surgery and body image. Preoperative Preparation focus on a diversity of nursing activities, including patient comprehensive assessment, patient /family health teaching, emotional support, planning care for the postoperative phase, and communicating patient data to health care team members (Abd-Alkareem 2013).

post operatively, the nurse keep patient in a suitable positioning, splinting the incision, providing pain management and wound care , additionally, teach patient methods to overcome voice changes, helping patient to perform neck exercise and nutrition therapy. The patient should also be informed about signs and symptoms of wound infection and complications. Patients should be instructed to seek medical help if signs or symptoms of neuromuscular excitability occur. It is obvious important the follow up visits that involve suture and drain removal, assessment of communication and voice quality, management of calcium status, and discussion of any related issues (Hashem, Mohammed, Ahmed, Azer, & Abd- Elmohsen 2018; Furtado 2011, Abd-Alkareem 2013).

Assessment of knowledge and practices of nurses is essential because it secure as a guideline to the care to be done, by correct knowledge and practices the nurse can maintain patient's health and prevent or detect early signs and symptoms of complications, and to take an appropriate decision in emergency situations

An Egyptian study by Abd-Alkareem (2013) concluded that, the majority of patients had insufficient knowledge and poor practices regarding their thyroidectomy care. concerning postoperative period, majority of patients had poor knowledge related to special position after surgery, starting time for drinking and eating, postoperative medication, drain, ambulation after surgery, pain management, none of the patients had information about self care following discharge. On the other hand, the knowledge of nurses regarding the care of patients undergoing thyroidectomy remains unidentified. Since there are a little study performed regarding the knowledge of nurses concerning the care of patients so, this study aimed to assess nurses' knowledge, attitude and practice regarding Patients undergoing thyroidectomy.

AIM OF THE STUDY:

The present study aimed to assess nurses' knowledge, attitude and practice for Patients undergoing thyroidectomy

Research questions:

What is the nurses' knowledge for Patients undergoing thyroidectomy?

What is the nurses' practice for Patients undergoing thyroidectomy?

What is the nurses' attitude for Patients undergoing thyroidectomy?

2. MATERIALS AND METHOD

Design

A descriptive research design was utilized in the current study.

Subjects

A convenience sample of 60 nurses, working at surgical units at Alexandria University Hospital ,Egypt .

Sample size:

Epi info program v 7.0 was used to find the sample size by applying the following parameters:

Expected frequency 50%,Acceptable error 5%,Confidence coefficient 95%,Population size 200 nurses,So minimum sample size 60 nurses

Tools

Three tools were used for data collection

Tool I: Nurses' Knowledge Assessment Questionnaire for thyroidectomy.

It was designed by the researchers after reviewing recent literatures review (Lewis &Pilcher., 2016; Timby &Smith., 2014; Cooray &Lake,.2018, *Ross et al 2016*) to assess nurse's knowledge about pre and post-operative care of thyroidectomy patients. The tool to be understandable by nurses developed into the Arabic language

It was consisted of two parts as the following:

Part 1:

It was concerned with demographic characteristics of studied nurses including the following data as age, sex, marital status, education. As well as work related data e.g. years of experience, training courses related pre- post-operative care of thyroidectomy patients

Part II:

It was consisted of 21 closed ended questions to assess nurses' level of knowledge about pre- post-operative care of thyroidectomy patients. It was included two questions about concept of thyroidectomy, four questions related to preoperative care as: Nutrition, thyroid medications, preoperative teaching about neck exercise, breathing exercise, seven questions about immediate post-operative care as correct position at bed, voice rest , pain management, importance of neck exercise ,wound dressing , nutrition , prevention of complications

8 questions concerning discharge plan as steps of wound care, signs and symptoms of infection, nutrition , prevention of complications (voice – swallowing – bleeding) ,medication , range of motion exercise for neck, importance of follow up and when to contact medical help   .

The studied nurses'answers is compared with model key answer, where one (1) scores are given to correct answer and (zero) for incorrect answer.

Scoring system:

The overall score of knowledge was categorized into three-level according to the following criteria: if the total score was ≥ 71%, it was considered high knowledge. If the score was between 51 to 70 %, it was deemed moderate knowledge and regarded as low knowledge if it was ≤ 50 %.

Tool II: Nurses' Practice Observational checklist:

This tool was developed by the researchers based on standardized nursing skills reviewed from related literature (Lynn, 2015; Potter, Patricia, & Perry, 2013 & Timby, 2017 ,*Atasayar, S., & GulerDemir, S. 2019 Dissanayake et al 2017, Yang et al 2016*) to measure nurses'practice regarding pre- post-operative care of thyroidectomy patients.

Tool consisted of three sections

Section one:It was included 12 items regarding patient's preoperative preparation. As preoperative medication, patient teaching (breathing, coughing exercise, neck exercise, measuring vital signs, patient consent and preparation bowel and bladder etc. **The second section** was included immediate post-operative care, it included 5 items as monitoring airway, breathing, circulation, level of consciousness and wound care. **The third section** was included post-operative care as measuring vital signs, correct positioning, wound care, nutrition , prevention of complications (voice – swallowing – bleeding) post-operative medication , psychological support and range of motion exercise for neck .

The score for each correct answer was assigned score one, and the wrong answer was assigned a score of 0. These scores were converted into a percent score.

Scoring system:

The overall score of practice was categorized into three-level according to the following criteria: if the total score was ≥ 71%, it was considered always performed. If the score was between 51 to 70 %, it was deemed moderate or sometimes performed and regarded as low or never performed if it was ≤ 50 %.

Tool III: Nurses' Attitude regarding Patients undergoing thyroidectomy It was developed by the researchers based on reviewing of recent related literature review(Wahba et al 2017, *Dogan et al 2017*) The tool consisted of (8) attitudinal statements regarding pre- post-operative care of thyroidectomy patients. The attitudinal items are tested against a three-point Likert scale agreeing, Neutral and disagreeing to force respondents to read each statement and respond appropriately.

Scoring system:

The overall score of attitude was categorized into three-level according to the following criteria: if the total score was ≥ 71%, it was considered high attitude. If the score was between 51 to 70 %, it was deemed moderate attitude and regarded as low attitude if it was ≤ 50 %.

Data collection:

Approval to perform the study was obtained from the managerial authorities after explaining the purpose of the study. The developed tools were reviewed by a panel of nine academic expertise in the field of Medical, Medical - Surgical nursing for clarity, relevance, comprehensiveness, Tool I Tool III were translated to Arabic. the accuracy of its translation was reviewed and validated by a jury of four expertise in Medical - Surgical Nursing . Reliability of tool I was done using the cronbach's alpha test and its value (r) was 0.977which indicates high correlation and was statically reliable. Also reliability of the tool II was done using inter-rater reability test and it is the result was 0.93. Tool III was done using Cronbach Alpha, its value (r) was 0.975, which indicated a high correlation and reliability of the tool. A pilot study was conducted on 10 % of subjects to test feasibility and applicability of the developed tools.

Data was collected from nurses in surgical units at Alexandria university hospital. First the researchers met the nurses and the purpose of study was explained and oral consent was obtained from every nurse before participating in the study, Tool I , Tool III were filled from the nurses, at suitable time or after finishing their duties. Whatever Tool II was filled by the researchers while nurses providing the pre-operative care for patients attending the operation. Nurses also were observed after operation during providing care in recovery room for 2 hours and post-operative care two days after surgery.

Data collection lasting for four months extended from November 2020 to February   2021.

Ethical considerations.:

Oral informed consent was obtained from each nurse of the study after clarification of the aim of the study. Confidentiality and privacy was assumed to each nurse.

The nurse informed he or she has the right to go away the study at any time with no reasons.

Statistical analysis of the data :

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. Quantitative data were described using range (minimum and maximum), mean, and standard deviation. Significance of the obtained results was judged at the 5% level.

The used tests were

1 - Chi-square test

For categorical variables, to compare between different groups

2 - Fisher's Exact or Monte Carlo correction

Correction for chi-square when more than 20% of the cells have expected count less than 5

3 - Pearson coefficient

To correlate between two normally distributed quantitative variables

3. RESULTS

Table I: illustrates distribution of studied nurses according to socio-demographic characteristics

In relation to the patient's age: The highest percentage (33.3%) of studied nurses in the age group of 20 to less than 30 years. As regards sex: The majority of the participants (91.7%) were female. In relation to marital status: the results revealed that the highest percentage of studied nurses (71.7%) were represented as a single

As for the level of education: More than two third (76.7%) of studied nurse were had diploma while (23.3%) of them had technical health institute of nursing. Moreover, in relation to experience in years, the majority (41.7%) of studied nurse had less than 10 years' experience in working

Finally in relation to attending Training courses about thyroidectomy the results found that 100% of studied nurse were not attend any training courses related to thyroidectomy   .

Table (1): Distribution of the studied nurses according to socio demographic characteristics (n = 60)

variable	No.	%
Age		
20–<30	20	33.3
30–<40	15	25.0
40–<50	18	30.0
50–≥60	7	11.7
Sex		
Male	5	8.3
Female	55	91.7
Marital Status		
Single	43	71.7
Married	17	28.3
Education level		
Diploma	46	76.7
Institute of nursing	14	23.3
Experience in years		
Less than 10	25	41.7
10–<15	23	38.3
More than 15	12	20.0
Min. – Max.	2.0 – 37.0	
Mean ± SD.	11.33 ± 8.77	
Attending Training courses about thyroidectomy		
No	60	100.0
Yes	0	0.0

SD: Standard deviation

Table2: Demonstrate distribution of the studied nurses according to their levels of knowledge related to thyroidectomy. The results revealed that the majority of studied nurses have low knowledge about the concept of thyroidectomy. While, as the majority of studied nurses had high knowledge about preoperative preparation and post-operative nursing care (91.7%, 70%) respectively .Also, the all studied nurses had low knowledge related to discharge plan after thyroidectomy. Finally, the two third (75%) of studied nurse had moderate over all knowledge related to thyroidectomy.

Table (2): Distribution of the studied nurses according to their levels of knowledge related to thyroidectomy (n = 60)

variable	Low knowledge ≤ 50 %.		Moderate knowledge 51 to 70 %,		High knowledge≥71%	
	No.	%	No.	%	No.	%
Concepts related thyroidectomy	49	81.7	0	0.0	11	18.3
Preoperative preparation	5	8.3	0	0.0	55	91.7
Post operative nursing care	10	16.7	8	13.3	42	70.0
Discharge plan	60	100.0	0	0.0	0	0.0
Overall knowledge	**5**	**8.3**	**45**	**75.0**	**10**	**16.7**

Table 3: It shows the total percent score of the studied nurses' knowledge related to thyroidectomy. The percent score of studied nurses had a knowledge about the concept related thyroidectomy were 36.67±37.81 with total score 0.73± 0.76

 In relation preoperative and post operative care, the percent score of majority of studied nurses had knowledge about preoperative preparation and postoperative care were (90.83±15.92, 72.14±16.51) respectively and total score (3.63± 0.64, 5.05±1.16) respectively.

Moreover, the results show that percent score of studied nurses had a knowledge related to discharge plan were 37.29 ± 11.15with total score 2.98± 0.89

Finally, the overall knowledge of studied nurses percent score were59.05 ± 8.91 with total score 12.40 ± 1.87

Table (3): Total percent score of the studied nurses' knowledge on thyroidectomy (n = 60)

variable	Total Score	Percent Score
Concepts related thyroidectomy	**(0–2)**	
Min. – Max.	0.0 – 2.0	0.0 – 100.0
Mean ± SD.	0.73± 0.76	36.67±37.81
Preoperative preparation	**(0–4)**	
Min. – Max.	2.0 – 4.0	50.0 – 100.0
Mean ± SD.	3.63± 0.64	90.83±15.92
Post operative nursing care	**(0–7)**	
Min. – Max.	3.0 – 6.0	42.86 – 85.71
Mean ± SD.	5.05±1.16	72.14±16.51
Discharge plan	**(0–8)**	
Min. – Max.	2.0 – 4.0	25.0 – 50.0
Mean ± SD.	2.98± 0.89	37.29 ± 11.15
Overall knowledge	**(0–21)**	
Min. – Max.	**8.0 – 15.0**	**38.10 – 71.43**
Mean ± SD.	**12.40 ± 1.87**	**59.05 ± 8.91**

SD: Standard deviation

Table 4: Illustrates distribution of the studied nurses regarding care before and after thyroidectomy. The majority of studied nurses had high practice in preoperative preparation and all studied nurses had high practice in nursing care immediately after operation (80%,100%) respectively. In relation to nursing care after thyroidectomy the results reveals that, more than two third(80%) of studied nurses had high practice in measuring vital signs for patients post- operatively .while as , the majority of studied nurses had moderate practice in observing wound condition and give emotional support for patient after operation(100%,80%) respectively. On the other hand, the results show that 100% of studied nurses had low practice in monitoring of Post-operative complications, and discharge plan for patient after thyroidectomy, Moreover, the majority of studied nurses had low practice in identifying the ways which reduce patients voice problems and in teaching patient to perform neck exercise in post-operative period of thyroidectomy (95%.100%) respectively.

Regards over all practice of studied nurses about 86.7% of nurses had moderate practice in nursing care before and after thyroidectomy.

Table (4): Distribution of the studied nurses regarding care practices before and after thyroidectomy (n = 60)

Nursing care before and after thyroidectomy	low practice ≤ 50 %.		Moderate practice 51 to 70 %,		High practice≥71%	
	No.	%	No.	%	No.	%
Pre-operative preparation	0	0.0	12	20.0	48	80.0
Nursing care immediately after the operation	0	0.0	0	0.0	60	100.0
Post-operative period	0	0.0	0	0.0	0	0.0
Measuring vital signs	12	20.0	0	0.0	48	80.0
Observing wound condition	0	0.0	60	100.0	0	0.0
Nutrition	0	0.0	0	0.0	60	100.0
Monitoring of post-operative complications.	60	100.0	0	0.0	0	0.0
Ways to reduce voice problems	57	95.0	3	5.0	0	0.0
Patient emotional support	12	20.0	48	80.0	0	0.0
Teaching neck exercise	42	70.0	18	30.0	0	0.0
Discharge plan	60	100.0	0	0.0	0	0.0
Overall practice	8	13.3	52	86.7	0	0.0

Table5: It shows the total percent score of the studied nurses' practice before and after thyroidectomy the percent score of studied nurses had practiced preoperative preparation were 81.67 ± 8.23 with total score 9.80 ± 0.99

In relation nursing care immediately after the operation, the percent score of studied nurses had practice immediate care after the operation were (100.0 ± 0.0) with total score (5.0 ± 0.0).

As regards nursing care after the operation, the results show that percent score of studied nurses who measuring vital signs, observing wound conditions and feeding patients were (70.0 ± 10.08, 60.0 ± 0.0, 100.0 ± 0.0) respectively with total score (2.80 ± 0.40, 3.0 ± 0.0, 2.0 ± 0.0) respectively. Moreover, the percent score of studied nurses who monitor post-operative complications and identify ways that reduce voice problems of patients were (35.0 ± 12.35, 39.63 ± 6.59) respectively with total score (1.40 ± 0.49, 3.57 ± 0.59) respectively. Also the percent score of studied nurses who given emotional support, teaching neck exercise and apply discharge plan for patient after operation were (53.33 ± 26.89, 21.0 ± 26.66, 17.14 ± 18.93) respectively. With total score (1.60 ± 0.81, 1.05 ± 1.33, 1.20 ± 1.33) respectively.

Finally, the overall practice of studied nurse's percent score were56.10 ± 6.01 with total score 31.42 ± 3.37

Table (5): Total percent score of the studied nurses' practice before and after thyroidectomy (n = 60)

variable	Total Score	Percent Score
Pre-operative preparation Min. – Max. Mean ± SD.	(0–12) 8.0 – 11.0 9.80 ± 0.99	 66.67 – 91.67 81.67 ± 8.23
Nursing care immediately after the operation Min. – Max. Mean ± SD.	(0–5) 5.0 – 5.0 5.0 ± 0.0	 100.0 – 100.0 100.0 ± 0.0
Nursing care after the operation		
Measuring vital signs Min. – Max. Mean ± SD.	(0–4) 2.0 – 3.0 2.80 ± 0.40	 50.0 – 75.0 70.0 ± 10.08
Observing wound condition Min. – Max. Mean ± SD.	(0–5) 3.0 – 3.0 3.0 ± 0.0	 60.0 – 60.0 60.0 ± 0.0
Nutrition Min. – Max. Mean ± SD.	(0–2) 2.0 – 2.0 2.0 ± 0.0	 100.0 – 100.0 100.0 ± 0.0
Post-operative complication assessment Min. – Max. Mean ± SD.	(0–4) 1.0 – 2.0 1.40 ± 0.49	 25.0 – 50.0 35.0 ± 12.35

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	(0–9)	
Ways to reduce voice problems	(0–9)	
Min. – Max.	3.0 – 5.0	33.33 – 55.56
Mean ± SD.	3.57 ± 0.59	39.63 ± 6.59
Patient emotional support	(0–3)	
Min. – Max.	0.0 – 2.0	0.0 – 66.67
Mean ± SD.	1.60 ± 0.81	53.33 ± 26.89
Teaching neck exercise	(0–5)	
Min. – Max.	0.0 – 3.0	0.0 – 60.0
Mean ± SD.	1.05 ± 1.33	21.0 ± 26.66
Discharge plan	(0–7)	
Min. – Max.	0.0 – 3.0	0.0 – 42.86
Mean ± SD.	1.20 ± 1.33	17.14 ± 18.93
Overall	**(0–56)**	
Min. – Max.	**24.0 – 38.0**	**42.86 – 67.86**
Mean ± SD.	**31.42 ± 3.37**	**56.10 ± 6.01**

SD: Standard deviation

Table 6: Demonstrate distribution of studied nurses' attitude related to thyroidectomy. About 53.3% of studied nurses agree that all patients are risk for complications. While as, quarter of studied nurses disagree that nursing care for thyroidectomy take long time. Moreover, more than half of studied nurse agree to take care of thyroidectomy patients and they should receive adequate care for hospitalized patients after surgery (53.3%,55%) respectively. The majority of studied nurses (85%) agree that the priority of care should be given for patients who are highly risk for complications. while as 46.7% of studied nurses agree that the most complications of thyroidectomy can be prevented through nursing care. Also, more than half of studied nurses (53.3%) agree that the regular assessment should be done for all hospitalized patients with thyroidectomy. In addition, the majority of studied nurses agree that the nurses take on heavy responsibilities when patients are prone to thyroidectomy

Finally, the results show that percent score of studied nurses was 69.58 ± 19.17 and total score 19.13 ± 3.07

Table (6): Distribution of the studied nurses attitude related to thyroidectomy (n = 60).

Q	Attitude	Disagree		Neutral		Agree	
		No.	%	No.	%	No.	%
1	Do you think are all patients at possible risk of complications?	6	10.0	22	36.7	32	53.3
2	Do you think nursing care for thyroidectomy is taking too long?	15	25.0	17	28.3	28	46.7
3	Are you ready to take care of thyroidectomy patients?	0	0.0	28	46.7	32	53.3
4	Do you feel that priority care is given to patients at risk of complications?	0	0.0	9	15.0	51	85.0
5	Do you think most of the complications of thyroidectomy can be prevented?	5	8.3	27	45.0	28	46.7
6	Do you think hospitalized patients receive adequate thyroidectomy care?	10	16.7	17	28.3	33	55.0
7	Do you think that a regular assessment of thyroidectomy should be performed on all patients during hospitalization?	6	10.0	22	36.7	32	53.3
8	Do you see nurses taking on heavy responsibilities when patients are prone to thyroidectomy?	5	8.3	4	6.7	51	85.0
	Low attitude ≤ 50 %.			9		15.0	
	Moderate attitude 51 to 70 %,			23		38.3	
	High attitude ≥71%			28		46.7	
Total Score				**(8–24)**			
	Min. – Max.			**13.0 – 22.0**			
	Mean ± SD.			**19.13 ± 3.07**			
Percent Score							
	Min. – Max.			**31.25 – 87.50**			
	Mean ± SD.			**69.58 ± 19.17**			

Table 7: Illustrates correlation between knowledge, attitude and practice of studied nurses related to thyroidectomy. There were no significance correlation between the studied nurses knowledge attitude and practice related to thyroidectomy (p=0.638, 0.213, 0.721) respectively.

Table (7): Correlation between knowledge, attitude & practice of studied nurses about thyroidectomy

	r	p
Knowledge Vs. practice	0.062	0.638
Knowledge Vs. attitude	-0.163	0.213
Practice Vs. attitude	0.047	0.721

r: Pearson coefficient

Table 8: shows Relation between nurses Overall knowledge and their socio-demographic characteristic . there is significant relation between nurses Overall knowledge and their socio-demographic characteristic regarding age, sex, marital status , education level and experience in years where(χ^2=21.855$^{*,\ MC}$p= <0.001*), (χ^2=28.870$^{*\ MC}$p= <0.001*), (χ^2=14.904$^{*,\ MC}$p= <0.001*),(χ^2=15.906$^{*,\ MC}$p= <0.001*),(χ^2=14.297$^{*,\ MC}$p= <0.002*) respectively

Table (8): Relation between nurses Overall knowledge and their socio-demographic characteristics (n = 60)

Socio demographic data	Overall knowledge						χ^2	^{MC}p
	Low knowledge (n = 5)		Moderate knowledge (n = 45)		High knowledge (n = 10)			
	No.	%	No.	%	No.	%		
Age								
20–<30	5	100.0	15	33.3	0	0.0		
30–<40	0	0.0	15	33.3	0	0.0	21.855*	<0.001*
40–<50	0	0.0	11	24.4	7	70.0		
50–≥60	0	0.0	4	8.9	3	30.0		
Sex								
Male	5	100.0	0	0.0	0	0.0	28.870*	<0.001*
Female	0	0.0	45	100.0	10	100.0		
Marital Status								
Single	0	0.0	33	73.3	10	100.0	14.904*	<0.001*
Married	5	100.0	12	26.7	0	0.0		
Education level								
Diploma	0	0.0	36	80.0	10	100.0	15.906*	<0.001*
Institute of nursing	5	100.0	9	20.0	0	0.0		
Experience in years								
Less than 10	5	100.0	20	44.4	0	0.0		
10–<15	0	0.0	17	37.8	6	60.0	14.297*	0.002*
More than 15	0	0.0	8	17.8	4	40.0		

χ^2: **Chi square test**   MC: **Monte Carlo**   *****: **Statistically significant** at p ≤ 0.05

Table 9: represents relation between nurses Overall knowledge and their socio-demographic characteristics. There is no significant relation between nurses Overall practice and their socio-demographic characteristics regarding age, sex, marital status , education level and experience in years where(χ^2=1.888$^{,\ MC}$p= 0.647), (χ^2=3.357 ^{FE}p=0.128)   , (χ^2=2.134.$^{,\ FE}$p=0.206),(χ^2=1.036, ^{FE}p=0.374),(χ^2=3.811,^{MC}p=0.150)respectively

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Table (9): Relation between nurses Overall knowledge and their socio-demographic characteristics (n = 60)

Socio demographic data	Overall practice				χ^2	p
	Low practice (n =8)		Moderate practice (n = 52)			
	No.	%	No.	%		
Age						
20–<30	4	50.0	16	30.8		
30–<40	2	25.0	13	25.0	1.888	MCp= 0.647
40–<50	1	12.5	17	32.7		
50–≥60	1	12.5	6	11.5		
Sex						
Male	2	25.0	3	5.8	3.357	FEp= 0.128
Female	6	75.0	49	94.2		
Marital Status						
Single	4	50.0	39	75.0	2.134	FEp= 0.206
Married	4	50.0	13	25.0		
Education level						
Diploma	5	62.5	41	78.8	1.036	FEp= 0.374
Institute of nursing	3	37.5	11	21.2		
Experience in years						
Less than 10	6	75.0	19	36.5		
10–<15	1	12.5	22	42.3	3.811	MCp= 0.150
More than 15	1	12.5	11	21.2		

χ^2: **Chi square test**   MC: **Monte Carlo**   FE**: Fisher Exact**

*: Statistically significant at p ≤ 0.05

Table 10: shows Relation between nurses Overall Attitude and their socio-demographic characteristics. There is a significant relation between nurse overall attitude and their age and educational level and nurses years of experience where (χ^2=13.964*, MCp= =0.019*), (χ^2=13.438*, MCp= 0.001*), (χ^2=17.163*, MCp= 0.001*) respectively .

Table (10): Relation between nurses Overall Attitude and their socio-demographic characteristics (n = 60)

Socio demographic data	Overall Attitude						χ^2	p
	Low attitude (n = 9)		Moderate attitude (n = 23)		High attitude (n = 28)			
	No.	%	No.	%	No.	%		
Age								
20–<30	5	55.6	7	30.4	8	28.6		
30–<40	0	0.0	7	30.4	8	28.6	13.964*	MCp=0.019*
40–<50	4	44.4	9	39.1	5	17.9		
50–≥60	0	0.0	0	0.0	7	25.0		

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Sex								
Male	0	0.0	0	0.0	5	17.9	4.933	^{MC}p= 0.071
Female	9	100.0	23	100.0	23	82.1		
Marital Status								
Single	4	44.4	19	82.6	20	71.4	4.641	0.098
Married	5	55.6	4	17.4	8	28.6		
Education level								
Diploma	4	44.4	23	100.0	19	67.9	13.438*	0.001*
Institute of nursing	5	55.6	0	0.0	9	32.1		
Experience in years								
Less than 10	5	55.6	12	52.2	8	28.6		
10–<15	0	0.0	11	47.8	12	42.9	17.163*	^{MC}p= 0.001*
More than 15	4	44.4	0	0.0	8	28.6		

χ^2: **Chi square test**   MC: **Monte Carlo**   *: **Statistically significant at p ≤ 0.05**

4. DISCUSSION

Complications after thyroidectomy are rare but their consequences can often be life -threatening (Memon et al., 2012). The preoperative care and postoperative nursing care it is important. So, the nurse should meet all needs of the patient, improve the patient's confidence, and help patient to return to normal life activities (Chen & Wang, 2011). The aims of this study were to; assess nurses' knowledge, attitude and Performance for Patients undergoing thyroidectomy.

The result of the present study revealed that the highest percentage (33.3%) of studied nurses in the age group of 20 to less than 30 years. And majority was female and nursing diploma represented the highest percentage of nurses' education, less than half of them have an experience less than ten years of experience. Finally, all of the nurses have no in- service training concerning thyroidectomy. This result was in congruent with study done *by Sulaiman (2020) entitle "Assessment of nurses knowledge toward post thyroidectomy management in Nineveh governorate hospitals"* reported that less than half of nurses 43.3% of the study sample age were20-29 years, and females represented high proportion 55.0%, 40.0% of them have secondary and institution educational level. Also, mentioned that the nurses have no previous training course regarding thyroidectomy management

The result portrays that the nurses had moderate over all knowledge concerning thyroidectomy patient care. It might be due to that care of thyroidectomy patient are rarely discussed in educational courses. This finding indicates they require for ongoing education regarding thyroid diseases and its management to improve nurses' awareness. This result was in line with study performed by   Shaama eta l (2018) "Knowledge of the University of Namibia Third Year Bacherol in Nursing Students Regarding Post-Operative Management of Patients After Thyroidectomy**"** concluded that the knowledge level of nursing students on the subject of management of patients post thyroidectomy was under average level. Therefore, it is a necessary for further learning and training for nursing students on perioperative nursing care, mainly on thyroidectomy for improving their level of knowledge and increase patient safety during their clinical practices

Furthermore, a study carried out in Northern Gauteng, South Africa on recovery room nurses' knowledge concerning post-operative airway emergences in adults confirmed that nurses did not have needed knowledge and capability necessary to provide quality post- operative care as the nurses not succeed to achieve the accepted performance set for recovery room nurses (Van Hussein et al, 2014)

Regarding Pre-operative preparation and nursing care immediately after the operation. Result of the current study confirmed that the nurses had high performance level. It may be related that doctors stress upon needed Pre-operative preparation.

For nursing care after the operation: the current study confirmed that the nurses had high performance level regard post-operative measuring of vital signs. It may be related that doctors instruct the nurses to measure patient vital signs and informed them with any abnormalities for early detection of patient had decrease in blood pressure and to exclude wound infection post thyroidectomy. In support of this study results, the study done by Kalezic et al , (2010) in Serbia confirmed that many of patients who carried thyroidectomy had hypotension during and after surgery .

Concerning monitoring of postoperative complications The current study showed the nurses had low level of performance in it .This result confirmed by Desoky et al (2009) Who mentioned that the whole nurses didn't perform post thyroidectomy monitor for signs and symptoms of risky complications. Also, he returns that result to all nurses didn't have sufficient information about postoperative complication and deficiency of standard of thyroidectomy nursing care

The current study indicated that the nurses had low level of performance regarding ways to reduce voice problems. Explanation could be that nurses might not be entirely alert about ways to reduce voice problems post thyroidectomy. It return to thyroidectomy is rarely discussed in educational courses. This suggests that nurses require for ongoing education regarding thyroid disease and its treatment. In this perspective (Yu and Wu 2017) reported that few studies have investigated dysphonia after thyroidectomy although the effectiveness of communication therapy for treating it has been well established in the literature in recent decades

For Patient emotional support the current study illustrated that the nurses had moderate level of performance. It could be related that nurses ignore effect of anxiety on patient outcomes. In addition to, nurses lacking skills of effective therapeutic communications. This result is in line with study done by Gezer and Arslan (2019) entitle "The Effect of Education on the Anxiety Level of Patients before Thyroidectomy" reported that the preoperative education introduced by nurses did not affect patients' level of anxiety. However, information given to nurses regarding the anxiety harmful effects on the patient.

The current study showed that the nurses had low level of performance regarding teaching patient neck exercise. It can explain by nurses ignore steps of neck exercise and importance of this exercise. This result is in agreement with Abd-Alkareem (2013) who reported that none of the patients perform neck exercise or breathing and coughing exercises, this can explained by two reasons firstly, they did not aware about the importance of this exercise . Secondary, most of the patients feel neck pain and stiffness after the surgery.

The current study demonstrated that the nurses had low level of performance in providing discharge plan to the patient .it could be the nurses perform only the professional activities such as taking vital signs, giving treatment, but they have a lack of time to give any knowledge about the patient condition or teaching him how to cope with the daily living activities .this result in congruent with result carried by Abd-Alkareem (2013) who reported that patients undergoing thyroidectomy have insufficient information regarding the surgery preoperative and postoperative period, self care following discharge. Also, confirmed that knowledge deficiency may be due to lack of communication between patients and health team members as the nurses are either too busy with administrative work or routine work and not provide patient with sufficient information.

The results show that studied nurses had a high attitude related to thyroidectomy. This result was in opposite with a study conducted in Bangladesh by Bask et al,(2010)on the knowledge and attitudes of nurses concerning post-thyroidectomy pain management and their practices reported that nurses had unsatisfactory level of knowledge and attitudes in post-thyroidectomy pain management.

The results prove that there was no significance correlation between the studied nurse's knowledge attitude and practice related to thyroidectomy This finding is contradict with the result of Mamdouh et al (2020) who study Nurses' Performance concerning the implementation of Patient Safety Measures and reported that there was positive correlation and significant between total knowledge and total practice.

The result confirmed that there is a relation between nurses' knowledge and their socio-demographic characteristic. This finding is consistent with the result of Mamdouh et al (2020) who reported that there was statistically significant relation between age, gender, qualification and years of nurses' experience and their knowledge Opposite result was found by Sulaiman and Al- Saigh (2020) [153] who evaluated nurses knowledge regarding post thyroidectomy managing and

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reported that there is no a significant relationships was found between nurse's knowledge and their demographical variables.

The results of the present study confirmed that there was no statistically significant relation between the nurses' practice and their socio-demographic characteristics. This result was opposite by Mamdouh et al (2020) who study Nurses' Performance concerning the implementation of Patient Safety measures and reported that a high statistically significant relation was found between the nurses' practice and their qualification.

The present study result showed that there was an a significant relation between nurses' attitude and their age and educational level and nurses years of experience in years .This result was supported by Wahba et al (2017) who their confirmed that there was a significant relations between nurses' attitude and their age and experience.

This study searches for to assess nurses' knowledge, attitude and practice for Patients undergoing thyroidectomy.

5. CONCLUSION

Based on the results of this study, the following conclusions were justified: Nurses showed moderate level of knowledge and performance and high level of attitude regarding care of patients undergoing thyroidectomy.

6. RECOMMENDATIONS

Based on the findings of the present study, the following recommendations are to be considered:

-The establishment of the central in-service educational department in hospital to periodically refresh nurse's knowledge and practice

-Encouraging nurses to attend national and international congresses, seminars, symposia and workshops regularly about care of patients undergoing thyroidectomy

-Further studies should be conducted to study the effect of nursing educational program in improving patient quality of life

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