Nurses' Performance Regarding Venous Thromboembolism Prophylaxis at Intensive Care Unit

Amira Sabry Mohammed [(1)], **Nadia Mohammed Taha** [(2)], **Eman Mohammed Abd El-Aziz** [(3)]

[(1)]Demonstrator – medical surgical nursing department-,Faculty of nursing- Zagazig university, [(2)] prof. of medical surgical nursing- Faculty of nursing- Zagazig university [(3)] lecturer of medical surgical nursing - Faculty of nursing -Zagazig university

Abstract

Background: Venous thromboembolism (VTE) is a major health issue worldwide which includes deep venous thrombosis (DVT) and pulmonary embolism (PE).**The aim of the study:** was to assess nurse's performance regarding venous thromboembolism prophylaxis in Intensive Care Unit at Zagazig University Hospital. **Subjects & Methods: Research design:** A descriptive exploratory design was utilized. **Setting:** Medical Intensive Care Units at Zagazig University Hospitals. **Subjects:** ninety one ICU nurses from the same hospital setting which have been selected to the study. **Tools of data collection:** Two tools were used for collection of data, first tool: a structure questionnaire for nurses to assess personal and job characteristics and assess nurses' knowledge regarding venous thromboembolism and their attitude regarding VTE prophylaxis. Second tool: an observational checklist to assess nurses' practice regarding venous thromboembolism prophylaxis. **Results**: results showed that, about two thirds of the studied nurses were more than 30 years. Majority of them were female and married. Most of them had diploma and more than half of them had experience in ICU more than 10 years. 27.5% of the studied nurses had satisfactory total knowledge regarding venous thromboembolism and prophylaxis. None of the studied nurses had satisfactory total practice regarding venous thromboembolism prophylaxis. 56.0% of the studied nurses had satisfactory attitude regarding venous thromboembolism prophylaxis. Relation's analysis showed no statistically significant relation between studied nurses' knowledge, attitude and personal and job characteristics. There was statistically significant positive correlation between age and experience and significant negative correlation between total knowledge and experience. **Conclusion:** A nurses had unsatisfactory level of knowledge and practice about venous thromboembolism and its prophylaxis while satisfactory attitude toward it. **Recommendations:** provide training and educational program for nurses who provide bed side care to patients in ICU to enhance their knowledge and practice.

Keywords: Nurses, Performance, Venous Thromboembolism, Prophylaxis.

Introduction:

Venous thromboembolism (VTE) is the term used for a combination of the formation of a thrombus in a vein or veins of the systemic venous system, (usually in the lower limbs or abdomen/pelvis), and the embolization of a thrombus to the pulmonary arterial system via the inferior vena cava and right heart chambers. The commonest clinical presentation in VTE is a deep venous thrombosis (DVT), and a pulmonary embolism (PE) [(1)].

VTE is a global public health problem and is the commonest cause of preventable hospital death in many developed countries [(2,3)]. VTE is a significant cause of preventable morbidity and mortality. [(4)] It is now becoming increasingly recognized that VTE can have an impact on patients, physicians, and other health care providers including hospitals and nursing facilities [(5)]

There are different risk factors in occurring VTE, whether congenital or acquired [(6)]The factors that predict an increased risk of VTE associated with

an ICU admission, including increased age, APACHE(acute physiology and chronic health evaluation) score, recent surgery, sepsis, previous VTE, malignancy, major trauma, prolonged hospital stay preceding the ICU transfer, mechanical ventilation, use of paralytic drugs, insertion of a femoral vein catheter, and failure to use thromboprophylaxis [7].

The DVT can cause a spectrum of symptoms ranging from edema, pain, and discoloration, to chronic and disabling symptoms or venous ulceration, or may be asymptomatic. PE may cause tachycardia, dyspnea, hypotension, hypoxemia, chest pain, pleural effusion, or sudden death or, like DVT, may be asymptomatic or unsuspected, and discovered only at autopsy or incidentally by imaging studies [8].

The patients suffer from late, significant bleeding complications due to anticoagulant therapy, recurrent VTE or other complications (ie, persistent pulmonary hypertension, post-thrombotic syndrome, chronic venous stasis) [9] The most common complication is post-thrombotic syndrome (PTS) which occurs in approximately one third of patients that experience DVT. PTS can cause symptoms of chronic pain, heaviness, and swelling to the affected extremity that can result in development of venous leg ulcers in severe cases [10] Also VTE is associated with high mortality, morbidity, and costs[11]

Medical surgical patients in hospital are at high risk for DVT because they are often immobilized for extended periods of time. [12] Prolonged immobilization leads to complications, these are much easier to prevent than to treat. Nurses play a vital role in preventing the complications of immobilization. If the nurses are knowledgeable about the potential changes of immobility and implementing preventive interventions, they will avoid lots of discomfort for the patient [13].

Nurse's practice should be made to prevent the occurrence of VTE by risk assessing all hospitalized patients and offering them thromboprophylaxis as appropriate [14]

Significance of the study

According to Centers for Disease Control and Prevention (15), it is estimated that between 300,000 and 600,000 people suffer from venous thromboembolism each year, and up to 100,000 people die as a result of it worldwide[16]

Nurses can play a major role in VTE prevention if well educated and empowered to change hospital culture. Their increased level of knowledge undoubtedly leads to an improvement in the delivery of patient care. Appropriately trained nurses are skilled in assessing the risk of VTE in their patient and ensuring prophylactic measures are in place. Even in the absence of a medical practitioner, the nurses can initiate appropriate mechanical measures [20].

Aim of the study:

The present study aimed to assess nurse's performance regarding venous thromboembolism prophylaxis in Intensive Care Unit at Zagazig University Hospital

Research Questions:

-What is the level of nurses' knowledge regarding venous thromboembolism prophylaxis?

- What is the level of nurses' practice regarding venous thromboembolism prophylaxis?

- What is the nurses' attitude regarding venous thromboembolism prophylaxis?

Subjects and Methods:

Research design:

A descriptive exploratory design was used.

Study setting:

The study was conducted in Medical Intensive Care Units at Zagazig University Hospitals (General, Haematemesis, Cardio, CCU, Stroke and Paid Intensive Care Units).

Study subjects:

The study sample was convenient sample (91) included all available nurses who provided direct patient care, work experience at least one year and acceptance to participate in the study and working in Medical Intensive Care Units at Zagazig University Hospitals.

Tools of data collection:

Two tools were used for data collection:-

Tool I: A structure questionnaire for nurses:

It was designed in Arabic language. It consisted of 72 questions and composed of three parts as the following:-

Part 1: personal and job characteristics:-

It Included data about demographic characteristics of the study subjects consisted of 9 close ended questions such as their age, gender, social status, qualifications, years of experience.

Part 2: Nurse's knowledge questions:

Entail questions to assess nurses' level of knowledge regarding venous thromboembolism and prophylaxis. It consists of 53 questions in the form of multiple choice questions and classified to Knowledge regarding VTE disease and Knowledge regarding VTE prophylaxis.

The scoring system regarding knowledge:-

The nurse had satisfactory level of knowledge when the total score equal or above 50%, and unsatisfactory when it below 50%.

Part 3: Nurses' attitude:

It included 10 statements divided into five positive and five negative statements related nurses' attitude regarding VTE prophylaxis as VTE important medically and for nursing and important for patients in intensive care, their willingness to participate in the prevention of VTE by using Likert scale from 0 to 4 degrees as strongly agree =4, agree =3, some what agree =2, disagree =1 and strongly disagree =0.

The scoring system regarding attitude:-

The nurse had satisfactory level of attitude when the total score equal or above 60% but unsatisfactory when it below 60%.

Tool II: Nurses' practice observational checklist:

Observational checklist included items about practical skills for venous thromboembolism risk assessment, anticoagulant injection, leg measurements, applying compression stockings, intermittent pneumatic compression, active and passive range of motion exercises(ROM), deep breathing exercises and assisting the patient with ambulation developed by the researcher guided by (Ministry of Health Malaysia [21], Nettina [22], Ahmed [23]& Eldosoky [24])

The scoring system regarding practice:-

The nurses had satisfactory level of practice when the total score equal or above 60 % and unsatisfactory if it below 60% based on statistical analysis.

Content validity and reliability:

It was be used to modify the tools. It ascertained by 7 jury of expertise from 4 professor nursing and 3 professor medical staff, who were reviewed the tools for clarity,

relevance, comprehensiveness, understandable and applicability.

The tool is reliable for this study, the knowledge by Cronbach,s Alpha is o.82 and practice is 0.93 and also attitude is 0.86 by the same test.

***Field work**:*

Field work of the present study was executed in 20 month from July, 2015 to February, 2017.

Distribution of the questionnaire was done every day at the end of morning shift and gave the afternoon (evening shift) nurses before starting their work. The researcher gave each nurse individually to fulfill the questionnaire, the time required for completion of the questionnaire was ranged from 30- 45 minutes. Observation was done continuously, every day at morning and afternoon shift during the previous procedures before filling the questionnaire.

***Pilot study**:*

A pilot study was performed on 10 (10%) of nurses to test clarity, comprehensiveness and estimation of time needed to fill out the questionnaire sheet. Then the tools were modified according to the results of pilot study. Simple modifications were done based on pilot results as rephrasing and rearrangement. The pilot study was excluded from the study sample.

***Administrative and ethical considerations**:*

An official permission for data collection in Zagazig University Hospitals was obtained from the hospital administrative personnel by the submission of a formal letter from the Dean of the faculty of Nursing.

Nurses' verbal consent was obtained before starting data collection.The researcher was assured maintaining anonymity and confidentiality of subjects' data. Furthermore nurses were informed that they are allowed to choose to participate or not in the study and that they have the right to withdraw from the study at any time.

Statistical analysis:

Data collected were analyzed by computer using the statistical package for social sciences (SPSS) software version 20. Mean and standard deviation, median and percentages were used for data summarization. Student's t test and Chi square test were used for testing significant differences and relations between variables. Pearson's correlation test was used for testing linear relationship between numeric variables. Significant difference was considered if $p \leq 0.05$.

Results:

Table 1: Shows personal and job characteristics of the studied nurses. The table clarifies that about two thirds of the studied nurses (63.7 %) were more than 30 years. Majority of them were female (92.3 %) and married (95.6 %). In relation to educational level most of studied nurses (73.6%) had diploma and more than half of them (50.5%) had experience in ICU more than 10 years. In addition, (20.9%) had training, (46.2%) had policy and (9.9%) had booklets about venous thromboembolism prophylaxis.

Figure 1: Shows total knowledge level regarding both venous thromboembolism and its prophylaxis among studied nurses. As can be observed, only 27.5% of the studied nurses had satisfactory total knowledge regarding venous thromboembolism and its prophylaxis.

Figure 2: Displays studied nurses' attitude toward venous thromboembolism prophylaxis. It can be noticed, more than half of the studied nurses (56.0 %) had

satisfactory attitude regarding venous thromboembolism prophylaxis.

Figure 3: Clarifies total nurses' practice regarding venous thromboembolism prophylaxis among studied nurses. It is obvious that, none of the studied nurses (0%) had satisfactory total practice regarding venous thromboembolism prophylaxis.

Table 2: Presents relation between studied nurses' knowledge and personal and job characteristics. The table reveals that there were no statistically significant relations.

Table 3: Reveals relation between total knowledge scores and items of practice. According to the table, there were no statistically significant relation between total knowledge scores and items of practice.

Table 4: Demonstrates correlation between age, experience and the three variables of the study. As can be seen in the table, there was statistically significant positive correlation between age and experience and significant negative correlation between total knowledge and experience.

Discussion:

Prevention of VTE is considered a patient safety measure in the most mandated quality initiatives and importance of nursing role *Laryea &Champagne* [25] *Morrison* [26] reported that nurses are on the frontline of thrombosis prevention. By playing an essential role in diagnosis and risk assessment, applying timely prevent methods, and providing vital educational and psychologic support for patients with VTE, skilled nursing intervention can save lives. *Cawley* [27] Added that VTE is a life threatening condition that often can be prevented by knowledge and preparedness. Recent research on VTE indicates that nurses play a part in its prevention through assessment and consistent nursing care.

The present study clarified that two thirds of the studied nurses were more than 30 years. Majority of them were female and married. In relation to educational level, most of studied nurses had diploma and more than half of them had experience in ICU more than 10 years. These findings are agree with various studies about VTE in different settings in Egypt, *Eldosoky [24], Ahmed [28], Abo El-Ella [29] and, Ahmed [30]* they reported that, all nurses involved in the study were females, half of them are married and the majority of nurses had diploma in nursing science. While contraindicated with the present study in some points; most of nurses were less than 30 years and more than half of them their experiences were less than 5 years. Also *Lee et al* [31] in two acute care hospitals in California who reported that slightly more than half of participants had earned a Bachelor's in nursing or a Master's degree in nursing.

The current study reported that about one third only of studied nurses had training about VTE prophylaxis. This could be due to lack of facilities, training place, time and the desire to learn or update their knowledge or practice. This result is supported by *Lee et al* [31] in California who revealed that fewer than half of participants reported that they had attended an in-service education or course related to VTE care. There is a substantial need for focused the current in-service continuous education for bedside nurses to prepare them to conduct VTE risk assessment and prevention care offered in acute care settings. Meanwhile, disagrees with multiple researches about VTE in Egypt which reported that none of the studied nurses attend any previous training courses for DVT or VTE prophylaxis.

Eldosoky [24], *Abo El-Ella* [29] *and, Ahmed* [30] .

The current study reported that nearly half of studied nurses had hospital policy about VTE prophylaxis. The reason may be due to the policy is present but unannounced for all people. The result is consistent with *Bhatti et al* [32] in their study about knowledge, attitude and practices of healthcare providers towards deep vein thrombosis prophylaxis in five teaching hospitals of Rawalpindi in Pakistan; they found that, almost half of medical/surgical units have no policies for DVT prophylaxis. *Ahmed* [28] revealed that standard for special care require that each special care unit should develop specific written policies and procedures, which must be available for all nursing personnel to serve as a guide for each action. Moreover, for critical care units to consistently provide appropriate thromboprophylaxis, a formal policy, guideline or care map that is specific to the hospital is essential. *McLeod & Geerts* [33].

The present study reported that fewer of studied nurses had booklet about VTE prophylaxis. This may be due to there is no previous studies carried out on VTE prophylaxis to made booklets, lack of availability of books by the hospital with absent of ICU library and the nurses had not time for reading due to workload**.** *Gad & El-sheikh* [34] in their study about Effect of Mechanical Measures on Prevention of Deep Vein Thrombosis among General Surgical Patients at Cairo University, they recommended that a booklet about DVT prevention should be available and distributed for all general surgical patients in every ward.

Nurses require knowledge of pathophysiology, risk factors, and methods of assessment risk factors, required investigations, and course prevention strategies. Therefore, continuously assess and reevaluate nurse's knowledge and practice in prevention of venous thromboembolic disease is necessary**.** *Davis* [35] Staff nurses should know how to prevent the patient from complications. One of the roles of nurse is to prevent the patient from complications. For that purpose, the nurse should know various methods for the prevention of complications. These methods can be obtained by improving the knowledge and practice of nursing staff**.** *Deshmukh &Shinde* [36]

Based on the above mentioned facts, the present study reported that only one quarter of studied nurses had satisfactory total knowledge regarding VTE and prophylaxis in general. This inadequacy of total nurses' knowledge might be as a result of most of studied nurses had diploma, lack of refreshment of knowledge, continuous training program and insufficient courses related to VTE included in their undergraduate curriculum of nursing education. Similar results were found by various studies about VTE in different settings in Egypt *Ahmed* [28], *Abo El-Ella* [29], *Ahmed* [30] *and Mohamed* [37] they found that lack of nurse's knowledge toward VTE and deep venous thrombosis.

Furthermore, *Bhatti et al* [32] in Pakistan found that knowledge of health care providers (nurses and physicians) about DVT in five teaching hospitals is less than adequate. In addition, *McFarland et al* [38] in United Kingdom (UK) clarified that low levels of VTE knowledge existed throughout the system (nurses, physicians, pharmacists and haematologists). While this result disagrees with *Lavall* [39] who reported that no shortage exists of knowledge for healthcare providers (nurses and physicians) about VTE in Rhode Island at U.S.A.

On the other hand, the present study showed that more than half of studied nurses had satisfactory knowledge regarding VTE prophylaxis only. This result opposed with the study conducted by *Tang et al* [40] in North China who emphasized that the knowledge of VTE prophylaxis among the medical staff (nurses and physicians) of ICUs is deficient. Likely *Antony, Moly & Dharan* [41] their study in the six selected ICUs at Amrita Institute of Medical Sciences, Kochi revealed that no staff nurses were having a good knowledge about DVT prevention.

The present study revealed that more than half of the studied nurses had satisfactory attitude regarding VTE prophylaxis. Reasons of satisfactory attitude seem to be they have alert conscience, good ethics and feelings, compassionate, kind, empathic attitude toward patients. This result is in agreement with various study results as *Ahmed [30], Bhatti etal [32], Lavall [39], Gao & Kause [42], and Elder et al [43]* they revealed that most of staff members recognized VTE as a problem and prophylaxis was clinically important. Also administration of VTE prophylaxis is necessary with continuous monitoring and recording for patients with VTE. Similar findings were found in a study carried by *Nyirenda & Mukwato* [44] who reported that nurses had positive attitudes towards nursing care**.**

The study results revealed that none of the studied nurses had satisfactory total practice regarding VTE prophylaxis. This could be due to lack of knowledge, training, qualification, number of nursing staff, close observation and nursing care standard, awareness of policy for prevention, insufficient equipment, improper environment and work overload. *Ead* [45] Stated that lack of nurse's practice related to absence of definite job description and policy. *Dawooda* [46] Added that other factors that affect nurse's practice are the shortage of the nurse's number and overlapping of nursing activities especially in morning shifts due to absence and ignorance of clear job description.

The finding goes in the same line with *Antony, Moly & Dharan* [41] their study findings revealed that no staff nurses were having a good practice about DVT prevention. Moreover *Ahmed [28], Abo El-Ella [29], Ahmed [30] and Mohamed [37]* who reported that performance of all the nurses included in their studies were inadequate. Similarly, studies in other countries revealed that, poor nurses' practices toward VTE. *Bhatti etal [32], Long [47], Amland et al [48], and Ali & Hassan [49].*

Relation's analysis showed that no statistically significant relation was detected between studied nurses' knowledge and personal and job characteristics. These findings go in the same line with *Eldosoky* [24] who found that there were no statistically significant relation between nurse's socio-demographic characteristics and their knowledge about DVT disease and its prevention. While disagrees with *Alhosis et al* [50] who found a significant relationship between caregivers' socio-demographic characteristics and their total mean knowledge score. In addition, *Mersal* [13] revealed that a highly and statistically significant difference was found between the personal characteristics and total mean score of knowledge of caregivers regarding prevention of immobility complications.

The results of the current study showed that no statistically significant relation was between total knowledge scores and items of practice. These finding is in harmony with *Abo El-Ella*

[29] found that there was no significant difference between nurse's knowledge and performance. Furthermore, *Antony, Moly & Dharan* [41] added that there was no significant association between knowledge and practice of staff nurses on prevention of DVT among hospitalized patients.

On the other hand, these results disagree with *Ahmed* [28] who indicated that there was positive correlation between nurse's knowledge and performance in relation to their level educations. Also *Mersal* [13] revealed that a highly and statistically significant difference was found between total mean score of knowledge and practice of caregivers regarding prevention of immobility complications.

The result of the current study revealed that there was statistically significant positive correlation between age and experience. This may explain that naturally increasing age is accompanied with increasing experience. *Wolpin ,et al*[51] Contradicted with the previous findings, who indicated that no significant differences in demographics were found.

The present study clarified that there was statistically significant negative correlation between total knowledge and experience. This may be due to nurses who have more experience will be responsible for administrative and managerial activities and due to old age, which might reflect fresh general information that is difficult to be recall. The same findings were supported by *Ahmed* [28] who reported that there was negative correlation between nurse's knowledge in relation to their years of experiences and their age regarding prevention of venous embolic disease. Mean while in contrast with *Abo El-Ella* [29], *Mohamed* [37] who reported that there was no significant correlation between nurse's knowledge and years of experience.

The study was concluded that studied nurses had unsatisfactory total knowledge and none of them had satisfactory practices regarding VTE prophylaxis while more than half of the studied nurses had satisfactory attitude toward it. Among the different items of nurses' practices regarding VTE prophylaxis; none of the studied nurses had any satisfactory score in all items except anticoagulant injection and non pharmacological nursing measures.

Finally, prevention is better than cure. VTE prevention is essential for patient's safety and one of quality standards in hospital. Critical care nurse plays a vital role in early detection and prevention of VTE and the corner stone of VTE management. Hence, it should provide them adequate knowledge and training about the preventive measures from VTE.

Conclusion:

According to the results of the present study, it can be concluded that the studied nurses had unsatisfactory total knowledge and none of them had satisfactory practices regarding VTE prophylaxis while more than half of the studied nurses had satisfactory attitude. There is no statistically significant relation between studied nurses' knowledge and personal and job characteristics. There is no statistically significant relation between nurses' attitude and their personnel and job characteristics. There were no statistically significant relation between total knowledge scores and items of practice. There is statistically significant positive correlation between age and experience and significant negative correlation between total knowledge and experience.

Recommendations:

Based on the results of the present study the following recommendations are suggested:-

- A standardised VTE risk assessment tool, based on current best evidence and best practice, should be available.

- Hospital should have policies and strategies for thromboprophylaxis.

- Periodic refreshing training and educational program to enhance knowledge and practice of nurses are needed regarding VTE.

- Further studies to assess the effect of training program on nurse's knowledge and practice regarding VTE prevention.

Table 1: Personal and job characteristics of the studied nurses (n=91):-

Variables	*N*	*%*
Age		
>30	33	36.3
<30	58	63.7
Mean ±SD	30.5±6.1	
Range	22-58	
Sex		
Male	7	7.7
Female	84	92.3
Marital status		
Single	4	4.4
Married	87	95.6
Qualifications		
Diploma	67	73.6
Diploma + specification	15	16.5
Bach	8	8.8
Other	1	1.1
Experience in ICU		
>10	45	49.5
<10	46	50.5
Mean ±SD	11.8±5.7	
Range	2-38	
Training about VTE prophylaxis		
No	72	79.1
Yes	19	20.9
Hospital policy for prevention of venous thromboembolism		
No	49	53.8
Yes	42	46.2
Booklets about venous thromboembolism prophylaxis		
No	82	90.1
Yes	9	9.9

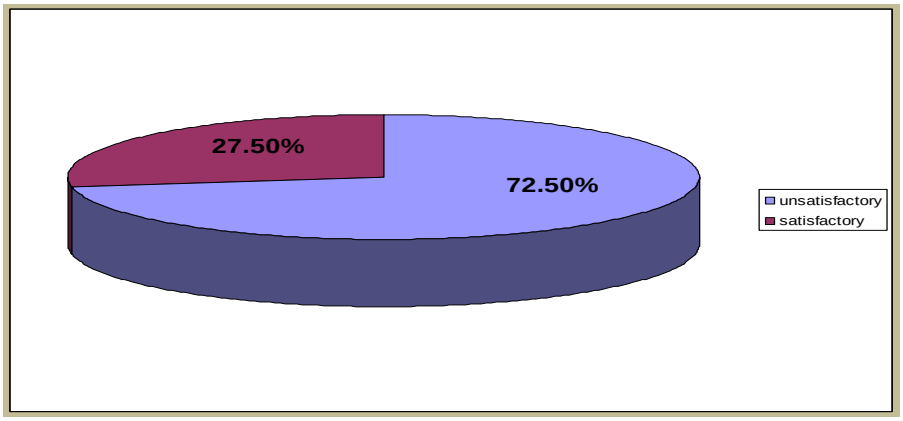

Figure 1: Total knowledge level regarding venous thromboembolism and its prophylaxis among studied nurses (N=91)

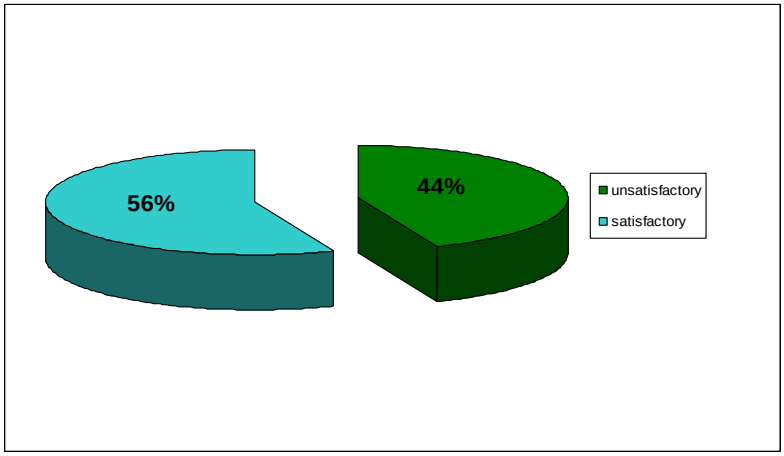

Figure 2: Studied nurses' attitude toward venous thromboembolism prophylaxis (n=91)

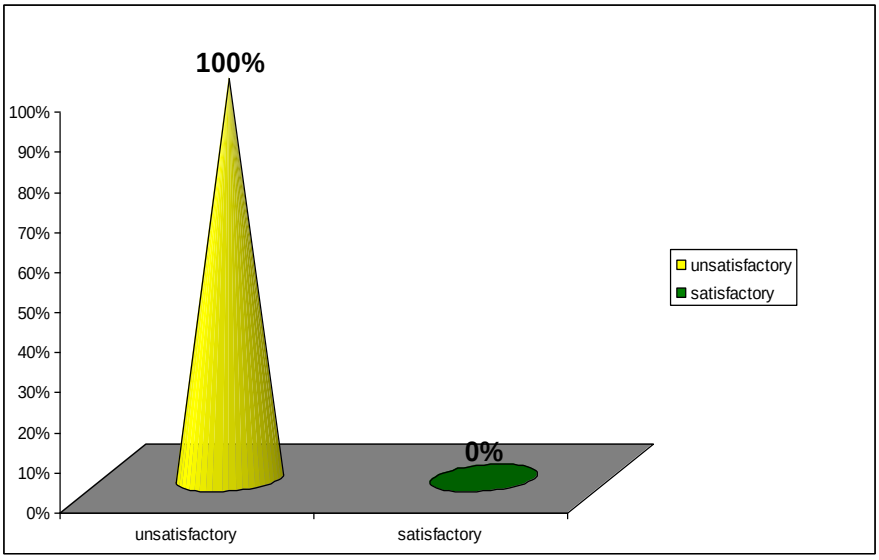

Figure 3: Total nurses' practice regarding venous thromboembolism prophylaxis among studied nurses (N=91)

Table 2: Relation between studied nurses' knowledge and personal and job characteristics (n=91):-

Personal and job characteristics	*Unsatisfactory knowledge*		*Satisfactory knowledge*		X^2	*P*
	NO	**%**	**NO**	**%**		
Age						
>30	26	78.8	7	21.2	1.01	0.31
<30+	40	69.0	18	31.0		
Sex						
Male	7	100.0%	0	0.0%	2.87	0.09
Female	59	70.2%	25	29.8%		
Social status						
Single	4	100.0%	0	0.0%	1.58	0.20
Married	62	71.3%	25	28.7%		8
Qualification						
Diploma	53	79.1%	14	20%		
Diploma + spec.	8	53.3%	7	46.7%	7.27	0.06
Bach	5	62.5%	3	37.5%		
Other	0	0.0%	1	100.0%		
Experience						
>10	35	77.8	10	22.2	1.21	0.2
<10	31	67.4	15	32.6		
Training						
No	54	75.0%	18	25.0%	1.05	0.3
Yes	12	63.2%	7	36.8%		
Policy						
No	36	73.5%	13	26.5%	0.04	0.82
Yes	30	71.4%	12	28.6%		
Booklets						
No	58	70.7%	24	29.3%	1.34	0.24
Yes	8	88.9%	1	11.1%		

P <0.05

Table 3: Relation between total knowledge score and items of practice of the studied nurses (N=91):-

Items of studied nurse's practice		*Unsatisfactory knowledge N=66*		*Satisfactory knowledge N=25*		X^2	*P*
		NO	**%**	**NO**	**%**		
Non pharmacological nursing measures	**un satisfactory**	49	71.1	20	28.9	0.32	0.56
	Satisfactory	17	77.3	5	22.7		
Anticoagulant injection	**un satisfactory**	25	75.7	8	24.3	0.27	0.6
	Satisfactory	41	70.6	17	29.4		

P <0.05

Table 4: Correlation between age, experience and the three variables of the study (n=91):-

Item	*Age*	*Experience*	*Total knowledge*	*Total attitude*	*Total Practice*
Age	1	.923**	-.103-	.155	.167
		.000	.332	.143	.114
Experience	.923**	1	-.206-*	.066	.199
	.000		.050	.535	.059
Total knowledge	-.103-	-.206-*	1	-.090-	-.163-
	.332	.050		.395	.123
Total attitude	.155	.066	-.090-	1	-.153-
	.143	.535	.395		.148
Total	.167	.199	-.163-	-.153-	1
Practice	.114	.059	.123	.148	

*** Correlation is significant at the 0.01 level (2-tailed).*
** Correlation is significant at the 0.05 level (2-tailed).*

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