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Factors Affecting Postoperative Nursing Performance in The Surgical Units

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Abstract

Postoperative care is very important phase for patient, as it can prevent or reduce the occurrence of the complications. **Aim**: Assess factors affecting postoperative nursing performance in the surgical units. **Research design**: A descriptive exploratory design. **Setting:** surgical units at Benha university hospitals. **Subjects**: Convenient samples of 75 nurses were worked at the previously mentioned setting at the time of data collection. **Tools of the study**: self-administered questionnaire and an observational checklist. **Results**: more than three quarters of the studied nurses had unsatisfactory level of knowledge, more than three quarters of the studied nurses reported that the total factors had an effective effect on their performance, about two thirds of the studied nurses had unsatisfactory level of practice, there were highly statistical significant relation between studied nurses' Knowledge and their experience, while there was statistically significant relation between studied nurses' knowledge and their job and their education, statistically significant relation between studied nurses' practice, their job, their experience and the courses which were taken, highly statistical significant relation between factors affecting nursing performance in the surgical unit and their age, while there was statistically significant relation between factors affecting nursing performance in the surgical units and their marital status and their experience**,** statistically significant relation between studied nurses' knowledge and studied nurses' practice, anda significant correlation between studied nurses' knowledge and a studied nurses' practice**. Conclusion**: It was concluded from this study that nurses' performance depends on education, training, experience and attending of courses. **Recommendations**: The study recommended the importance of implementing an educational training program to improve nurses' performance regarding management of patient after surgery, and recommended to develop a good nurse job description.

Key words: Postoperative care, Nursing performance and factors affecting nursing performance.

Introduction

One of the most important responsibilities of the nurse is the care of patients after surgical procedures. Even for relatively young and healthy individuals, surgery is a psychologically and physically stressful ***(Nagpal et al., 2010).***

Patients at the postoperative phase are in a risk state and require constant awareness and assessment that can only be achieved with effective communication between the anesthesia provider and the post anesthesia care unit nurse ***(Manser et al., 2013).*** Postoperative handovers occur in a dynamic environments where care providers have a lot of tasks, this generate the probability of occurring medical errors

and loss of information. In hospitals there is an ineffective communication between the anesthesia provider and the PACU nurse ***(Nagpal et al., 2010)***.

Today's health care environment is of paramount concern to nursing and health administrators. Of importance is the question of what can be done to enhance ability to provide care in a potentially stressful environment to mediate the effects of a stressful environment on the performance of nurses in the practice environment. Technical support systems include those factors that are related to the design of work and how the work is performed in the theory of support systems and nursing performance, proposed that structural and technical support systems can improve the efficiency and effectiveness of nurse performance. Conceptual model, structural support systems include the patient care assignment system, such as team or environment. Technical support environment, technical systems include those factors that are related to the design of work and how the work is performed in the theory of support systems and nursing performance, proposed that structural and technical support systems can improve the efficiency and effectiveness of nurse performance. Conceptual model, structural support systems include the patient care assignment system, such as team or primary nursing. ***(American Nurses' Association,2007).***

There are several important considerations in the postoperative period. These include laboratory testing, pain management, respiratory management, venous thromboembolism (VTE) prophylaxis, radiologic evaluation, diet progression, wound care, and postoperative follow-up. After the patient reaches to the surgical unit several complications can occur, so the nurse has an important role in this period to prevent occurring of these complications **(*Lynch, Pasini& Dan, 2015*).**

Significance of the Study

Postoperative care is the management of a patient after surgery. This includes care given during the immediate postoperative period, both in the operating room and post anesthesia care unit (PACU), as well as days following the surgery. This aims to prevent complications such as infection, promote healing of the surgical incision, and to return the patient to a state of health, and decreasing length of hospitalization, and thus prevent nosocomial infection***(Perry, Potter&Ostendorf, 2014)***

Aim of the Study

This study aims to assess factors affecting postoperative nursing performance in the surgical units through the following:

1-Assess the nurses' level of knowledge regarding postoperative nursing performance.

2-Assess the nurses' level of practice toward postoperative nursing performance.

3- Assess factors affecting postoperative nursing performance in the surgical units.

Research Questions

1-What are the nurses' levels of knowledge regarding postoperative nursing performance in the surgical units?

2-What are the nurses' levels of practices regarding postoperative nursing performance in the surgical units?

3-What are the Factors Affecting postoperative nursing performances in the surgical units?

Subjects and Methods

Research design

The research design used in the study was descriptive exploratory design.

Setting

The study was conducted at Benha University Hospital in the surgical units.

Sampling

The Subjects included all available nurses in the previously mentioned setting. 75 nurses were included in the study while 7 nurses were included in the pilot study and excluded from the study.

The following tools were used for data collection:

I) Self-administered questionnaire sheet:

It will be used to assess nurses' knowledge regarding postoperative nursing performance. It will be developed by researcher based on review of relevant recent literature and itwill include three parts:

The first part: Demographic characteristics of nurses (age, sex, years of experience, educational level, training courses regarding postoperative nursing performance etc….).

The second part: questions related to nurses' knowledge regarding postoperative nursing performance (monitoring patients regularly, assess level of consciousness,care of wound, assess early signs of infection, prevention of complications and health education before discharge etc….) at surgical units.

The Third part related to other factors that affecting postoperative nursing performance including: environmental factors, Job related factors (organizational factors, psychological factors and personal factors) and factors related to patients.

II)Nurses practices observational checklists to assess nurses' level of practices in relation to postoperative management (immediate after surgery and in surgical units) by immediate monitoring of vital signs in PACU and prevention of complications in surgical units as wound infection until the patient is discharged.

❖ **Scoring system**

The total score of knowledge was 75 marks. Each correct answer was given one mark and the incorrect answer was given zero.

≥ 80% = Satisfactory level of knowledge = ≥ 60 marks correct answers.

< 80% = unsatisfactory level of knowledge = < 60 marks correct answers.

❖ **Scoring system**

The total score of factors affecting postoperative nursing performance in the surgical units is 43, every answer with yes considered that this factor had an effect on the nursing performance.

Part 2: The total score of practice was 277 marks; each correct step was given one mark and zero for the step which wasn't done. These scores were summed-up and converted into a percent score. It was considered that:-

- ≥80% (≥222 grades) was total satisfactory level of practice.

-<80% (<222 grades) was unsatisfactory level of practice.

Validity and Reliability

The tools of the study were given to a group of seven experts in medical surgical nursing field. The tools were examined for content coverage, clarity, relevance, applicability, wording, length, format, and overall appearance. Based on experts` comments and recommendations; minor modifications had been made such as rephrasing and rearrangements of some sentences.

Reliability: Internal consistency of interview questionnaire was assessed with the Cronbach's alpha coefficient. Cronbach's alpha coefficient of 0.00 indicates no reliability and a coefficient of 1.00 indicates perfect reliability. However, a reliability coefficient of 0.70 is acceptable***(Tavakol & Dennick, 2011)***.

Cronbach's alpha for reliability testing was performed as illustrated in the following table:

Items	No of variables	Mean	Variance	Cronbach's alpha	Internal consistency
Nurses' Practice in the first day	29	1.4	0.15	0.86	0.86
Practice from second day till discharge	248	1.6	0.14	0.71	0.71
Total practice	277	1.68	0.16	0.73	0.73

Pilot study

The pilot study was conducted to test the simplicity of language of tools. It was conducted to evaluate applicability of the study tools which used in data collection in addition to the time required to fill each tool. It was carried out.

Field Work

An approval was obtained from hospital directors and nursing directors, the purpose of the study was simply explained to nurses who agree to participate in the study prior to any data collection, data was collected by the investigator, self-administered questionnaire sheet was filled by the nurses regarding postoperative nursing management and each nurse was be observed by the researcher during the postoperative period. Data collection took about 8 months started from February until August 2017, the data was collected by the investigator through 5 days per week (Saturday-Sunday-Monday-Tuesday-Thursday) during morning and afternoon shifts. Each nurse was interviewed by the investigator for about (35:45) minutes.

Ethical Considerations

The ethical research consideration in this study includes the following:

The research approval was obtained from scientific research ethical committee in faculty of nursing at Ain Shams University before starting the study, theinvestigatorclarifiedthe objective and aims of the study to the nurses included in the study, the research was assured maintaining anonymity and confidentiality of the subject data and nurseswere informed that they were allowed to choose to participate or not in the study and that they had the right to withdraw from the study at any time.

Administrative Design

An official permission to carry out the study had been obtained from administrators of Benha University Hospital through an issued letter from the Dean of Faculty of Nursing/ Ain Shams University.

Statistical analysis

The data obtained was statistically analyzed and presented in number, percentages, tables and diagrams as required and calculations were done by means of statistical software packages namely; "SPSS" to test the significance of the result obtained. The statistical analysis has included; the arithmetic mean, standard deviation, *X2* test and T test.

Result

Part 1: Demographic characteristics of the studied nurses:

Table (1): Number and percentage distribution of the studied nurses according to their demographic characteristics (n=75).

Personal data	No	%
Age:		
<25 years	18	24%
25: <30 years	15	20%
30: <45 years	32	42.7%
45 years and more	10	13.3%
Mean ± SD	33.12 ± 8.77	
Education:		
Bachelor degree in nursing	15	20%
Diploma of Health Technician Institute	22	29.3%
Secondary diploma nursing technician	38	50.7%
Job:		
Specialist nursing	11	14.7%
Technician Nurse	60	80%
Head of the department	4	5.3%
Sex:		
Females	46	61.3%
Males	29	38.7%
Experience:		
<5years	15	20%
5-10 years	7	9.4%
10: <15 years	15	20%
15 years and more	38	50.6%
Mean ± SD	13.88 ± 8.90	
Having training courses regarding postoperative care:		
Yes	11	14.7%
No	64	85.3%

Table (1): illustrated that (42.7%) of the studied nurses between (30 :< 45) years old, and (50.7%) of them were secondary diploma nursing technician, (80%) of the studied nurses were technician nurses, and (61.3%) of the studied nurses were females, (50.6%) of the study of them had nursing experience 15 years old and more.As regarding to the training courses about postoperative care (85.3%) of the studied nurses reported that they never attended training courses.

Part 2: Nurses' Knowledge regarding postoperative nursing performance in the surgical units.

Table 2: Frequency and percentage distribution of total and subtotal nurses' level of knowledge regarding postoperative nursing performance in the surgical units: (n=75).

Items	Unsatisfactory (<80%)		Satisfactory (≥80%)	
	No(75)	%	No(75)	%
Immediate nursing care after surgery: Immediate postoperative nursing care	65	86.7%	10	13.3%
Administration of medications and drugs	67	89.3%	8	10.7%
Blood transfusion	52	69.3%	23	30.7%
Mean ± SD	10.67 ± 4.55			
Nursing care from second day till discharge: Fluid chart	41	54.7%	34	45.3%
Postoperative exercises	69	92%	6	8%
Nursing care of Psychological status	56	74.7%	19	25.3%
Postoperative Nutrition		44.7%	40	53.3%
Wound care	50	66.7%	25	33.3%
Nursing care of connected tubes	40	53.3%	35	46.7%
Postoperative Complications	34	45.3%	41	54.7%
Teaching during discharge	66	88%	9	12%
(Mean ± SD)	21.21 ± 5.60			
Total Knowledge	67	89.3%	8	10.7%
(Mean ± SD)	31.88± 9.19			

Table (2): Regarding total knowledge score this table showed that (89.3%) of the studied sample had unsatisfactory knowledge level with total **Mean** ±**SD**31.88± 9.19

Part 3: Factors affecting nurses' performance regarding management of patients after surgery in the surgical units.

Table (3): Frequency and percentage distribution of factors affecting nursing performance in the surgical units: (n=75).

Items	Yes		No	
	No (75)	%	No (75)	%
Environmental factors:	44	58.7%	31	41.3%
Mean ± SD	5.77 ± 1.52			
Job related factors:-				
Organizational factors	47	62.7%	28	37.3%
Mean ± SD	3.95 ± 1.01			
Psychological factors	61	81.3%	14	18.7%
Mean± SD	6.36 ± 1.53			
Personal factors	51	68%	24	32%
Mean ± SD	3.84 ± 1.48			
Factors related to the patient	72	96%	3	4%
Mean ± SD	3.93 ± 1.08			
Total Factors	63	84.0%	12	16.0%
Mean ± SD	23.85 ± 4.78			

Table (3): Regarding total factors that affect postoperative nursing performance this study showed that (84%) of the studied nurses reported that these factors had an effective effect on their performance, with total **Mean ± SD** 23.85 ± 4.78

Part4: Frequency and percentage distribution of total and subtotal nurses' level of practice regarding postoperative nursing performance in surgical units regarding care of devices and connected tubes and patient's teaching during discharge.

Items	Unsatisfactory (>80%)		Satisfactory (≥80%)	
	No (75)	%	No (75)	%
Care of the devices and connected tubes:				
The drain care	23	30.7%	52	69.3%
Care ofIV site	44	58.7%	31	41.3%
Urinary catheter care	63	84%	12	16%
Nasogastric tube care	59	78.7%	16	21.3%
(Mean ± SD)	41.56 ± 6.97			
Patients' teaching during discharge:				
Wound care				
Medications	67	89.3	8	10.7
Activities	64	85.3	11	24.7
Nutrition	47	62.7	28	37.3
Symptoms to be reported	59	78.7	16	21.3
Follow up	59	78.7	16	21.3
Community resources	11	14.7	64	5.3
	47	62.7	28	27.3
(Mean ± SD)	8.80 ± 2.80			
Total practice	45	60.0%	30	40.0%
(Mean ± SD)	173.51 ± 23.82			

Table (4): Regarding total practice score this table showed that (60%) of the studied sample had unsatisfactory practice level with total **Mean ±SD** 173.51 ± 23.82.

Discussion

Regarding the study of nurses' characteristics, the results of the present study revealed that about half of the studied nurses 'ages (42.7%) were between 31 to 45 years. This might explain that they are adult and tolerate the nature of the work. This finding is in agreement with ***El Feki, (2013),*** who conducted a study about assessment of nurses' performance caring of surgical patients connected with oxygen therapy, and found that the more than half of his study age group were above 30 years, and also ***Tanaka &Peniche, (2009),***who conducted a study about perioperative care for morbid obese patients undergoing bariatric surgery, and found that, there was predominance of female nurses, 68 (97.1%) with mean age of 37.0 years (SD = 8.25 years), ranging from 31 to 40 years (37%).

Concerning educational level, the present study results indicated that, more than half of the studied nurses were secondary school diploma (50.7%); this might elaborate current condition of nursing qualification in Egypt. This is consistent with ***Farag, (2008),*** who conducted a study about economic analysis of the nurse shortage in Egypt, and found that nursing education and the distribution on nurses approximately 87-93% diploma nursing school certificate.

Concerning to job, the present study results indicated that (%80) of the studied nurses were technician nurses. This result on the same line with ***Farag, (2008)*** who conducted a study about economic analysis of the nurse shortage in Egypt, and found that nursing education and the distribution on nurses approximately 87-93% were technician nurses with diploma nursing school certificate.

Regarding to studied nurses' gender, the present study revealed that more than half of the studied nurses were females (61.3%). This is may be due to the greater fraction of the nurses in Egypt were females and may also related to the studying of nursing in Egyptian university were exclusive for females only till few years ago. This finding is consistent with ***Zhu, Norman& While (2013)*** who conducted a study about nurses' self-efficacy and practices relating to weight management using surgical methods, and found that most of the nurses were females, confirming the majority of females in the profession.

Regarding years of experience, the current study showed that more than half of the studied nurses (50.6%) had experience 15 years and more because they had a certification and license to practice their field as a nurse since graduation. This finding goes in the same line with what was reported by ***Phillips, Wood & Kinnersley, (2013)*** who conducted a study about the challenge of obesity management for practice nurses in primary care after bariatric surgery and found that 61% of the studied nurses had 10-20 years of experience.

According to training courses about postoperative care, it was noted that more than three quarters of the studied sample hadn't attended training courses. This is in agreement with ***Tanaka &Peniche, (2009)*** who found that, the most of nurses didn't receive training courses and is contradicted with ***Ouspeh, Mohidin, Tabsh& Al-Habshi (2015),*** who conducted a study on the effectiveness of training and support on nurses' performance and nurses' resuscitation trainings at teaching hospital in KSA and found that the majority of the studied nurses received appropriate training courses.

From the researcher point of view the training courses for nurses about postoperative care are very important to improve their performance, and will affect positively on quality of care for patients after surgery.

Concerning the results of the current study, it was found that, more than three quarters of the studied nurses (89.3%) had unsatisfactory knowledge regarding immediate postoperative care. This may be due to that the nurses didn't have enough information, training courses about it and absence of standard about nursing care related to immediate postoperative care. This finding goes in the same line with ***(Marquis&Huston, 2009***) who conducted a study about leadership roles and management functioning in nursing and found that that each medical organization and profession must set standards and objectives to guide team and practitioners in performing safe and effective care. Also not only must standards exist, but leaders and managers also must see that subordinates know and understand the standards and must be aware that their performance will be measured in terms of their ability to meet the established standards to provide quality of care.

Regarding nurses' pharmacology knowledge about the drugsthey commonly administer; more than three quarters of the studied nurses (89.3%) of nurses in our study reported their knowledge as unsatisfactory. These findings are consistent with previous studies by ***(Markowitz, Pearsonm Kay***

&Loewenstein, 1981) who conducted a study, physicians, and pharmacists: their knowledge of hazards of medications,and ***(Boggs, Brown-Molnar &Delapp, 1988)*** who conducted a study aboutnurses' drug knowledge**,** where nurses' knowledge was below the expected standards.

The results showed that nurses' knowledge of blood transfusion was unsatisfactory for about two thirds of the studied nurses (69.3%) of nurses and about one third (30.7%) of the studied nurses had adequate knowledge.

These results were comparable to others; in the study of Tabiei, ***(Tabiei, et al., 2002)*** who conducted a study about Knowledge and performance of nurses in blood transfusion in medical training hospitals of Birjand and found that, just 26 nurses (25%) had the knowledge of beginning blood transfusion half an hour after the blood is delivered. ***(Bayraktar & Erdil, 2000)***conducted a study about blood transfusion knowledge and practice among nurses in Turkey, this related to the same issue reported 17.2% statistic.

From the investigator point of view the poor knowledge of blood transfusion as demonstrated by the results of our study; showed that this poor knowledge can increase probable incidence of risks related to blood transfusion and reduce the quality of health care, so training courses about blood transfusion strategy should be achieved.

The knowledge of nurses' regarding fluid chart was overall low were by which more than half of the studied nurses (54.7%), reported their knowledge as unsatisfactory. These findings should be considered to enhance the quality care in the Benha University Hospital.

Our findings were similar to what reported by ***(Aslam et al., 2017),*** and his colleagues in their study to assess the knowledge and practice of the registered nurses about fluid and electrolytes monitoring and administration in the cardiac surgery patients where the nurses have poor knowledge regarding fluid and electrolytes administration in the post-operative care for cardiac patients

The present study showed, more than half of the studied nurses (53.3%) had satisfactory knowledge regarding postoperative nutrition. This may be due to that nurses had basic nursing instructions for patients after surgery. This result in the same line with ***(Morris et al., 2015)*** who conducted a study about nutrition knowledge, behaviors of post-bariatric weight loss individuals, and found that more than half of the studied nurses in his study had satisfactory level of knowledge toward postoperative nutrition after bariatric surgery.

The findings regarding the nurses' knowledge about the caring of post-operative wound; showed that two thirds of the studied nurses (66.7%) had poor knowledge. This finding suggests the need for specialty training for nurses and appropriate placement after the training.

Our finding in this study were in line with the reported results of a similar study conducted by ***(Michalopoulos & Sparos, 2003)*** in Greece to examine the factors influencing post-operative wound care were the nurses and physicians (74 nurses and 16 physicians) and found that, they had lack awareness of aseptic techniques despite the availability of a large number of relevant and well established research findings and guidelines

In our study; about half of the studied nurses (45.3%) had unsatisfactory level of knowledge regarding postoperative complications, this was in accommodation with ***(Lucas & Walker, 2012) who conducted a study about*** Total hip and total knee replacement: postoperative nursing management.

British Journal of Nursing who mentioned that, as a part of the responsibilities in postoperative care; nurses need to be aware of risks of postoperative complications, and knowing the relevant anatomy and physiology surrounding the procedure. Also ***(Walker, 2012)*** added that, this allows the nurses to understand the difficulties that patients go through, and the need for care after surgery.

A retrospective study conducted in the post-anesthetic care unit (PACU) of a large hospital in São Paulo by ***(Popov &Peniche, 2009),*** andfound a relationship between postoperative complications and pain, nausea, agitation and bleeding in the presence of a nurse responsible for the PACU. This showed the importance of nurses in the immediate postoperative period care aimed at the patient's recovery, in the reduction and early detection of postoperative complications

Nurses are supportive and educative while caring for patients; however in our study more than three quarters of the studied nurses (88%) had unsatisfactory level of knowledge regarding patients' teaching during discharge. This may be due to the difficulties reported by nurses working in patient care were: lack of materials and resources, difficulties in implementing the nursing care in service and lack of training courses for the nursing staff. This result on the same line with ***(Liddle, 2013)*** who conducted a study about Principles of monitoring postoperative patients, and found that the majority of the studied sample had unsatisfactory level of knowledge regarding patients' discharge, and stated that all health professionals must continually update their theoretical knowledge and clinical skills

From the investigator point of view, during the discharge or prior to that, nurses must emphasize the importance of self-care after surgery. This could help to reduce the post-operative complications such as risk of infection or injury; also every health care agency must provide nurses with training courses to overcome these lacks of knowledge.

The present study also revealed that nurses' practice in the area of assessment of patient receiving tube feeding were unsatisfactory; about three quarters of the studied nurses(78.7%) had unsatisfactory level of practice regarding nursing care of nasogastric tube. The results were similar to what reported in a similar study in Suez Canal University by ***(Mohammed, et al., 2017)*** who conducted a study aboutAssessment of the Nurses Performance in Providing Care to Patients Undergoing Nasogastric Tube in Suez Canal University Hospital. *And found* that the majority of the studied nurses had unsatisfactory level of practice regarding care of nasogastric tube in Suez Canal University.

According to total nurses' practice regarding patient discharge after surgical operation, the current study revealed that all of the studied nurses had unsatisfactory practice regarding patients' teaching during discharge (wound care – medications – activities – nutrition - symptoms to be reported - follow-up-community resources). This may be due to lack of training courses, lack of job description, lack of motivation, lack of interest and shortage of nursing staff that lead to work overload. This result is consistent with ***Liddle, (2013)*** who conducted a study about postoperative care and monitoring of postoperative patients, and stated that all health professionals must continually update their theoretical knowledge and clinical skills.

While ***Majholm, Esbensen, Thomsen, Engbaek& Moller (2012)*** conducted a study about partners' experiences of post discharge period after day surgery, and found that, the nurses

had knowledge about the peri-operative experience and patient teaching. Their clinical practices often bridge inpatient and outpatient setting, giving them an understanding of what patients learned in the hospital, what they didn't learn and how they prefer to learn. In the other hand

In my opinion, this may be due to lack of training courses, lack of job description, lack of motivation, lack of interest and shortage of nursing staff that lead to work overload.

On this part the third question in our study which stated, what are the factors affecting postoperative nursing performance in the surgical units? That should be answered as the following:

On factors militating against the nurses' performance regarding management of patients after surgery in the surgical units; majority of the participants identified: Factors related to the patient more than three quarters (96%), Psychological factors more than three quarters (81.3%), Personal factors more than two thirds (68%) and organizational factors more than half (62.7%) as the most common factors.

Regarding environmental factors, this study is in an agreement with ***Chan, (2013)*** who conducted a study about occupational health, and mentioned that improvement of the work environment for nurses is important thus enhancing services delivery. Work place health promotion is a combined effort of employers, employees and society to improve the health and well-being of people at work.

Concerning organizational factors in the form of (work load, the unavailability or shortage in supplies, managerial support, task autonomy and organizational laws); more than two thirds (62.7%) of the studied nurses reported that these factors had an effective effect on their performance.

The finding is consistent with what is indicated by ***(Liebler& McConnell, 2008)*** who found that the burnout is caused by a combination of high workload and low coping resources.

(Letvak& Buck, 2008) conducted a study about factors influencing work productivity and intent to stay in nursing and also added that an increase in the workload resulted in increased absenteeism and a decrease in quality of care, and also confirm that staff shortages and shortage in supplies are constraints for delivering health care services

In our study; psychological factors were rated as working against the nurses' performance regarding management of patients after surgery in the surgical units by more than three quarters (81.3%) of the studied nurses. Limited work in this area had been done, so far, and only few studies had been published.

Regarding personal factors, more than three quarters (68%) reported that they have job unsatisfaction regarding personal factors which affected their performance. This is in an agreement with ***Ehlers &Oosthuizen, (2011)*** who conducted a study on a sample of 108 nurses within south Africa , which revealed that personal factors such as monthly salary that nurses most prefer is a high level of base payment, followed closely by a quality work environment

From the investigator point of view; inadequate salary in Egypt make nurses migrate to another countries leading to nurses' shortage and that lead to increase nurses' errors.the nurses reported that they are overloaded by work and ***Lim, Bogossian& Ahern, 2010***who conducted a study about Stress and coping in Australian nurses, and found that nurses commonly experience several stressors, including heavy workloads, conflicts between colleagues, working with inadequately prepared or inexperienced staff, aggressive patients and relatives, role ambiguity and shift work.

Concerning factors related to the patient, the present study showed that more than four fifth of the studied nurses (96%) reported that these factors had an effective effect on their performance. Limited work in this area had been done, so far, and only few studies had been published.

Conclusion

Based on findings of the present study, it can be concluded that:

About half of the studied nurses between (31:<45) years old, and more than half of them were secondary diploma nursing technician, more than three quarters of the studied nurses were technician nurses, and about of two thirds of the studied nurses were females, half of the studied nurses had nursing experience 15 years than and above, more than three quarters of the studied nurses had unsatisfactory knowledge level regarding management of patients after surgery.

More than two thirds of the studied nurses reported that the environmental, job related factors and factors related to the patient had an effective effect on their performance, about two thirds of the studied nurses had unsatisfactory level of practice regarding management of patients after surgery, there was highly statistical significant relation between studied nurses' Knowledge and their experience, while there was statistically significant relation between studied nurses' knowledge and their job and their education.

There was a statistically significant relation between studied nurses' practice, their job, their experience and the courses which were taken, there was a statistically significant relation between studied nurses' knowledge and studied nurses' practice, there was highly statistical significant relation between factors affecting nursing performance in the surgical unit and their age, while there was statistically significant relation between factors affecting nursing performance in the surgical units and their marital status and their experience**, t**here was a statistically significant relation between environmental factors affecting nursing performance in the surgical units and their education, job and experience, there was a statistically significant relation between organizational factors affecting nursing performance in the surgical units and their job and experience.

There was a statistically significant relation between psychological factors affecting nursing performance in the surgical units and their education, job, experience and sex, there was a statistically significant relation between personal factors affecting nursing performance in the surgical units and their education, job and experience. There was a statistically significant relation between environmental factors affecting nursing performance in the surgical units and their age, education and sex.

There was a statistically significant relation between studied nurses' knowledge and environmental factors, organizational factors, psychological factors, personal factors, personal factors and factors related to the patient, there was statistical significant relation between studied nurses' practice and environmental factors affecting postoperative nursing performance in the surgical units**,** there was moderate positive correlation between studied nurses' knowledge regarding management of patients after surgery in the surgical units and total score of practice.

Recommendations

Based on the results of the current research, the following suggestions for future research and practice are proposed:

Implementing an educational program for nurses to improve their performance regarding management of patients after surgery, surgical units should be supplied by a protocol regarding nursing performance for patients undergoing surgical procedures,

further study is recommended to evaluate the reflection of educational training program regarding management of patients after surgery on nurses' performance and consequently on the patients outcome, developing a simplified and comprehensive booklet including guidelines about nursing management for patients after surgery, close supervision and teaching on spot is needed to ensure that quality of care is provided by nurses while managing patients after surgery, develop nurses' job description that include all their responsibilities toward patient's care starting from history taking and ended by explaining how nurses work collaboratively with the general practice team to meet the patient's needs, supported by policy and procedures, and providing nurse leadership as required.

Improvement of the work environment, as the work place health promotion is a combined effort for employers, employees and society.

The study should be replicated on large sample and in different hospitals settings in order to generalize the result.

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