

## Assessment of Nurses Knowledge and Practice Regarding Postpartum Period at Abshaway central Hospital

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### Abstract

**Background**, postpartum period defined as 12 weeks after delivery, it is a critical transitional time for a woman, newborn and family on physiological and psychological levels. **Aim of the study** was to Assess Nurse's knowledge and practice regarding postpartum period. **A descriptive design** was adopted in this study. **A convenience sample** was used to recruit all nurses at postpartum unit. **Setting** was located at obstetric department at Abshaway Fayoum Governmental Central Hospital. **Data were collected** by using two tools: 1) structured interview questionnaire tool, and 2) observational checklist. **The result of this study** indicated that, there was highly statistically significant relation between total knowledge about postpartum period of the studied nurses and their job title, education level and years of experience. **Conclusion**: the majority of total knowledge of studied nurses had poor knowledge and unsatisfactory practical skills regarding postpartum period and its management. **Recommendations**: establishing plans for periodical and scheduled training courses and educational programs for nurses about postpartum period to improve nurses' knowledge and practices of postpartum care.

**Key words** : postpartum, Knowledge, practice, Nurses.

### Introduction

Postpartum period is a dangerous time for both mother and baby where morbidity and mortality are highly prevalent if proper care is not done. Postpartum care knowledge has significant role in reducing such complications (**Beraki et al., 2020**). Nurses frequently check the woman's physical wellbeing, her blood loss, feel if the uterus is contracting, possibly take her blood pressure and pulse as well as check the woman's genitals for any tears or grazes. Because there can occur some life threatening complications during postpartum period (**Mustafa & Mukhtar, 2015**).

Knowledge is the condition of knowing something with familiarity gained through experience or association. Adequate knowledge and awareness about postpartum period plays a major role in early diagnosis, appropriate management and reduction of adverse consequences related postpartum (**Abd-Elgany et al., 2019**).

Nursing practice is an act of providing care to patients and in so doing nurses implement nursing care plan which is based on the conditions of the patient, Identified inappropriate practices in our health care system as a contributory factor to the occurrence and severity of postpartum complications. Therefore, nurses' knowledge of postpartum period and its associated problems as well as the caring attitude and skills in managing the condition is essential for reducing the mortality and morbidity (**Sujata et al., 2015**).

### Significant of the study

The postpartum period is a critical phase in the lives of mothers and newborn babies. Most maternal and infant deaths occur during this time. Yet, this is the most neglected period for the provision of quality care (**WHO, 2015**). According to the World Health Organization (WHO), 295,000 women died from preventable causes related to pregnancy and childbirth in 2017.

Unfortunately, the overwhelming majority of maternal deaths (94%) occur in developing countries. While In Egypt, maternal mortality rate for 2017 was 37.00, a 2.63% decline from 2016 (WHO, 2019). Nani, (2018), reported that, 45% of maternal deaths occurs within 42 days after delivery.

Globally 2.4 million children died in the first month of life in 2019. The majority of all neonatal deaths (75%) occurs during the first week of life, and about 1 million newborns die within the first 24 hours (WHO, 2020).

There was no study done in Abshaway central hospital as assessment of nurse's knowledge and practice at postpartum unit.

This research plays an important role in improving of nurse's knowledge and performance which lead to decrease maternal and newborn mortality rate.

This research may be generalized for all Fayoum hospitals to assess and improve nurse's knowledge and practice.

### **Aim of the study**

The Aim of This study was to Assess Nurse's knowledge and practice regarding Postpartum period.

#### **Research question:**

- What is the level of nurse's knowledge regarding postpartum period?
- What is the level of nurse's practical skills regarding postpartum period?

#### **Subjects &Methods**

##### **Technical Design:**

Technical design of the study includes: research design, setting of the study, sample and tools of data collection:

#### **Research design:**

A descriptive design was carried out. Descriptive research is a research design that is used to investigate different phenomenon and situations. It always targets to answer questions like how the situation happen, when in terms of the time or date, where in terms of the place it happened, and what the issue or phenomenon is. The research design majorly focuses on explaining more of the population; therefore, it integrates different research methods for its success. It is a unique kind of design because there is no manipulation of the variable; rather, the researcher uses observation to measure the findings (Doyle et al, 2019).

#### **Research setting:**

The study was conducted at Abshaway - Fayoum Governmental Central Hospital, which is one of the major hospitals in Fayoum. It is filled with different specialties. The most important one is obstetric & gynecological. It provides a variety of health services to maternity and gynecological clients. The department units are obstetrics and gynecological operational unit, postpartum unit, high risk maternity unit, and family planning center. The sample was recruited from postpartum unit.

#### **Subjects**

##### **Sample type**

A convenience sample was used to recruit all nurses at postpartum unit. A convenience sample is a non-probability sample in which the researcher uses the subjects that are nearest and available to participate in the research study. This technique is also referred to as "accidental sampling," and is commonly used in pilot studies prior to launching a larger research project (Bhardwaj, 2019).

##### **Sample size**

The sample included all nurses who at postpartum unit (100 nurses) and who rotate at postpartum unit.

**Tools of Data collection:**

**Tool I:** structured interview questionnaire It include two parts:-

**Part 1:** Assessment of Socio-demographic characteristic data of the study sample such as (age, level of education, years of experience..etc).

**Part 2:** Assessment of knowledge regarding postpartum period written in simple Arabic language in the form of multiple choice questions for assessing the nurses' knowledge regarding the following :  
A) Knowledge related to postpartum period such as( concept of postpartum period, physiological changes ....etc).  
B) Assessment knowledge regarding care provided to newborn such as (breast feeding, cord care, baby bathing.....etc).  
C) Knowledge regarding quality of care and standard of care.

**Knowledge scoring system:** All knowledge variables were weighted according to items included in each question. The answers were classified into 2 categories:

- **Score (2):** if answer was correct
- **Score (1):** if answer was incorrect
- Good knowledge if total score (Equal or more than 70% of given answer was correct).
- Average knowledge if total score (less than 70% and more than 50% of given answer was correct).
- poor knowledge if total score (less than 50% of given answer was correct)

The score of total knowledge was classified as the following: - considered Good: ( $\geq 70\%$  correct answers), considered Average: ( $50 < 70\%$  correct answers), and considered poor :( less than 50% correct answer).

**Tool II:** observational checklist for postpartum and newborn care procedures to observe each nurse performance provided to postpartum women and newborn.

**Part 1:** Assessment in the first 24 hours after birth: the nurse assesses the women's vaginal bleeding, uterine contraction ....etc.

**Part 2:** Assessment after 24 hours after birth: the nurse assess women's general well-being and assessments made regarding the following urination, bowel function, perineal wound, lochia.....etc

**Observational checklist's practice scoring system:** Each step scored as following

- Score (2): if the step correct.
- Score (1): if the step not correct.
- Satisfactory practical skills: if  $\geq 70\%$  of steps was done correctly.
- Unsatisfactory practical skills: if  $>70\%$  of steps was done correctly.

**Ethical Considerations:**

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Ethical Aspects to consider before starting the study as the following:

- The research approval was issued from the Scientific Research Ethical Committee in the Faculty of Nursing at Ain Shams University before starting the study.
- An official permission from the selected study settings was obtained for the fulfillment of the study.
- The aim of the study was explained to all nurses before applying the tools to gain their confidence and trust.
- Written consent was obtained from nurses to participate in the study and confidentiality was assured.
- The data were collected and treated confidentially.
- Freedom to withdrawal at any time of data collection and with no obligation.

**Preparatory Phase:**

- A review of current and past national and international relevant literature related to postpartum period were done, by using local and international books, journals, periodicals, computer search was done to develop the study tools and contents
- Developing tools were done by the researcher and translating into simple Arabic language by professor of college of literature English specialty. .
- Content Validity and reliability: The vision tools were revised by a panel of (5) expertise of professors from the obstetric departments faculty of nursing Ain Shams university to measure the validity of tools.

Reliability of the tool was tested statistically. The reliability of all questions and high value of alpha cronbach.

Tools	Alpha Cronbach
Structured interview questionnaire	0.80
Observational checklist	0.82

**Pilot study:**

- A pilot study is conducted to test the clarity and applicability of study tools and the time needed to fill in the questionnaire, 10% of the total sample (10) nurses were chosen.

**A. Field of work:**

- The study was implemented for 11 months, from beginning of February 2019 to the end of December 2019. Implementation of the study was carried out in obstetrics and gynecology department at Abshaway Fayoum governmental central Hospital.
- The researcher began the study by visiting Obstetrics & gynecology department at Abshaway central Hospital, two days weekly, from 11 a.m. to 1 p.m. sometime the time was determined according to the participating nurses' performances.

- The researcher introduced herself and explained the purpose of the study to the nurses in the department.
- In the first day, the self-administered questionnaire completion ranged from 20-30 minutes.
- In the second day, the researcher used tools that were an observational checklist to assess nurses' practice regarding postpartum period.
- All these steps were repeated until all nurses in the department were included in the study

**III – Limitations of the study: at the end of the study**

- Many nurses don't perform practice some procedures such as fundal assessment (done by doctors).
- Some nurses were frequently absent which made it difficult to conduct the study in the presented time.

**Result**

**Table (1):** showed that, 48% of the studied nurses their age ranged between 30-<40 year with Mean ± SD 32.2±3.17 year. Also, 62% of the studied nurses residing in rural areas. Regarding to educational level, 52% of the studied nurses had nursing institute education. Also, 65% & 56% of the studied nurses had enough income and married, respectively. Moreover, 50% of the studied nurses their years of experience ranged between 10-<20 year with Mean ± SD 13.01±0.17 year. Likewise, 52% of the studied nurses attending training courses on infection control program.

**Table (2):** showed that, only 22% of the studied nurses had good knowledge about postpartum period and its management, also, 24 % of studied nurses had average knowledge. Moreover, more than half of studied nurses had poor knowledge.

**Table (3):** showed that, the majority of studied nurses (62%) had **unsatisfactory**

of total practical skills related to postpartum and newborn care. While, only 38 % of studied nurses had satisfactory of total practical skills related to postpartum and newborn care.

**Table (4):** showed that, there was highly statistically significant relation between total knowledge about postpartum period of the studied nurses and their job title, education level and years of experience at ( $P = < 0.01$ ). While, there was no statistically significant relation with age, residence, family income and marital status at ( $p > 0.05$ ).

**Table (5):** showed that, there was highly statistically significant relation between total nurses practice related to postpartum and newborn care and their job title, education level and years of experience at ( $P = < 0.01$ ). Also, there was statistically significant relation with age at ( $p = < 0.05$ ). While, there was no statistically significant relation with residence, family income and marital status at ( $p = > 0.05$ ).

**Table (6):** illustrate that, there was a positive correlation between total nurses knowledge about postpartum period and its management and their total practice at ( $P = < 0.01$ ).

**Table (1):** Distribution of demographic characteristics of studied nurses (n=100).

Socio-demographic Data	No	%
<b>Age</b>		
20-<30	34	34
30-<40	48	48
40-50	18	18
<b>Mean SD</b> 32.2±3.17		
<b>Residence</b>		
Urban	38	38
Rural	62	62
<b>Job title</b>		
Nurse	75	75
Department supervisor	20	20
Building supervisor	3	3
Head nurse	2	2
<b>Educational level</b>		
Secondary school	34	34
Nursing institute	52	52
Bachelor of nursing	12	12
Others	2	2
<b>Family income</b>		
Enough	65	65
Not enough	35	35
<b>Marital status</b>		
Single	38	38
Married	56	56
Widow	2	2
Divorced	4	4
<b>Training program</b>		
Gynecological& obstetric training	20	20
Quality training	25	25
Infection control program	52	52
Others	3	3
<b>Experience years</b>		
1-<10	32	32
10-<20	50	50
More than 20	18	18
<b>Mean SD</b> 13.01±0.17		

**Table (2):** Distribution of total knowledge of studied nurses (n=100).

Total knowledge about postpartum period and its management	Good $\geq 70\%$		Average 50- <70%		Poor < 50%	
	No	%	No	%	No	%
	22	22	24	24	54	54

**Table (3):** distribution of studied Nurses' Total practice related to postpartum and newborn care.

Total practice related to postpartum and newborn care	Satisfactory $\geq 70\%$		Unsatisfactory < 70%	
	No	%	No	%
	38	38	62	62

**Table (4):** Relation between demographic data of the studied nurses and their total knowledge about postpartum period (n=100).

		Levels of total knowledge about postpartum period and its management						X2	P-Value
		Good (n=65)		Average (n=26)		Poor (n=9)			
		No	%	No	%	No	%		
<b>Age (year)</b>	20-<30	20	30.8	10	38.5	4	44.44	7.367	.091
	30-<40	32	49.2	13	50	3	33.33		
	40-50	13	20	3	11.5	2	22.22		
<b>Residence</b>	Urban	18	27.7	15	57.7	5	55.6	2.211	.137
	Rural	47	72.3	11	42.3	4	44.4		
<b>Job title</b>	Nurse	46	70.8	21	80.8	8	88.9	13.67	.001**
	Department supervisor	14	21.5	5	19.2	1	11.1		
	Building supervisor	3	4.6	0	0.0	0	0.0		
	Head nurse	2	3.1	0	0.0	0	0.0		
<b>Education level</b>	Secondary school	13	20	14	53.8	7	77.8	13.08	.001**
	Nursing institute	40	61.5	10	38.5	2	22.2		
	Bachelor of nursing	10	15.4	2	7.7	0	0.0		
	Post graduate	2	3.1	0	0.0	0	0.0		
<b>Family income</b>	Enough	50	76.9	12	46.2	3	33.3	6.870	1.12
<b>Marital status</b>	Not enough	15	23.1	14	53.8	6	66.7	5.697	1.67
	Single	24	36.9	10	38.5	4	44.44		
	Married	38	58.5	15	57.7	3	33.33		
	Widow	1	1.5	1	3.8	0	0.0		
<b>Years of Experience</b>	Divorced	2	3.1	0	0.0	2	22.22	10.92	.004**
	1-<10	18	27.7	10	38.5	4	44.4		
	10-<20	33	50.8	12	46.2	5	55.6		
	More than 20	14	21.5	4	15.3	0	0.0		

\*\*highly significant at p < 0.01.

**Table (5):** Relation between demographic data of the studied nurses and their total practice related to postpartum and newborn care (n=100).

Items	Levels of total practice postpartum and newborn care				X2	P-Value	
	satisfactory (n=72)		unsatisfactory (n=28)				
	No	%	No	%			
Age (year)	20-<30	14	19.4	20	71.4	9.160	.031*
	30-<40	42	58.4	6	21.4		
	40-50	16	22.2	2	7.2		
Residence	Urban	20	27.8	18	64.3	3.950	.112
	Rural	52	72.2	10	35.7		
Job title	Nurse	49	68.1	26	92.9	13.90	.000**
	Department supervisor	18	25	2	7.1		
	Building supervisor	3	4.1	0	0.0		
	Head nurse	2	2.8	0	0.0		
	Secondary school	9	12.5	25	89.3		
Education level	Nursing institute	49	68.1	3	10.7	13.83	.000**
	Bachelor of nursing	12	16.7	0	0.0		
	Post graduate	2	2.8	0	0.0		
Family income	Enough	46	63.9	19	67.9	7.051	1.07
Marital status	Not enough	26	36.1	9	32.1	5.327	1.72
	Single	22	30.5	16	57.1		
	Married	46	63.9	10	35.7		
	Widow	1	1.4	1	3.6		
Years of Experience	Divorced	3	4.2	1	3.6	13.64	.000**
	1-<10	12	16.7	20	71.4		
	10-<20	42	58.3	8	28.6		
	More than 20	18	25	0	0.0		

\*significant at p < 0.05. \*\*highly significant at p < 0.01.

**Table (6):** correlation between nurses' knowledge and practices

Item	Total nurses practice	
	R	P- value
Total nurses knowledge	0.491	.000**

### Discussion

The finding of the current study revealed that, approximately less than half of the studied nurses their age ranged between 30-<40 year with Mean ± SD 32.2±3.17 year. Also, half of the studied nurses their years of experience ranged between 10-<20 year with Mean ± SD 13.01±0.17 year. This means that most of the nurses are juniors and the advantages of nurses in young age are full of energy and hyperactivity which is always required in such crucial department. Also, from the

researchers' point of view, years of experience have a significant effect on the nurses' knowledge and practices.

These results were in agreement with **Negussie et al. (2018)** who conducted a study to assess “Knowledge and practice of essential newborn care and associated factors among nurses and midwives working at health centers in Jimma Zone, Ethiopia” and stated that, the participants age ranges from 22 to 51years with the mean of 30.86 (SD= ± 5.78) years. Two third of the study

participants had more than ten years' experience about delivery care service.

Concerning the educational level, it was found that more than half of the studied nurses had nursing institute education. Also, less than two-thirds of the studied nurses had enough income and married, respectively. Also, less than two-thirds of the studied nurses residing in rural areas. This may be due to the fact that institute in nursing provide the community with large number of graduate nursing institute education nurses than other agencies as faculties of nursing.

These results were in agreement with **Elshatarat et al. (2018)** who conducted a study to assess "perinatal nurses' and midwives' knowledge about assessment and management of postpartum depression" and stated that less than two-thirds of the studied nurses had nursing institute education and married, respectively. In the same field, **Kaur (2014)** conducted a study to assess "skill development of nurses in managing the fourth stage of labor" and revealed that slightly less than two-thirds of the studied nurses had satisfactory income and were residing in rural areas.

According to attendance of training courses, the finding of the current study revealed that, more than half of the studied nurses attending training courses on infection control program. This may be attributed to the importance of training courses, which play an important role in enhancing and updating nurses' knowledge and performance besides improving the quality of care given to women at postpartum. These results approved with the study performed by **Hassan & El-Seman (2016)** conducted a study at Egypt to assess "immediate normal postpartum nursing care at woman's health university hospital" who found that more than half of the studied nurses attended training courses about immediate postpartum nursing care this may

be related to the different characteristics of the study subjects.

Related to total knowledge about postpartum period and its management, the current study revealed that more than half of the studied nurses had poor level of total knowledge about postpartum period and its management. While, less than one-third of them had good level of total knowledge.

This study results disagree with **Elkholy et al., (2017)**. Who carried out a study about "Assessment of Nurse's Practical Skills regarding avoidance of Postpartum Hemorrhage" and revealed that the Majority of nurses had average knowledge regarding avoidance of postpartum hemorrhage.

According to total nurses' practice related to postpartum and newborn care, As noticed in the current study less than two-thirds of the studied nurses had unsatisfactory level of total practice related to postpartum and newborn care. While, more than one-third of them had satisfactory level of total practice related to postpartum and newborn care.

These results probably due to lack of education, training and feedback and work overload. These results were agree with **Martines et al., (2016)** who carried out a study about "the practice of nursing in prevention and control of postpartum hemorrhage: An integrative Review" and revealed that there was lack of skilled nurses and midwives and highlighted the need for continuing education.

According to relation between socio-demographic data of the studied nurses and their total knowledge about postpartum period and its management, the current study revealed that there was highly statistically significant relation between total knowledge about postpartum period and its management of the studied nurses and their

job title, education level and years of experience. These results might be explained as; most of nurses who had good to average score of knowledge held bachelor of nursing and had more years of experience. These results agree with **Ibrahim & Abdel-Menim (2016)** who carried out a study about "Improving maternity nurses' performance regarding prevention and control of postpartum hemorrhage" and revealed that there was significant statistical positive effect from demographic characteristics as qualifications and years of experience of the studied sample on their knowledge score.

Regarding to the relation between demographic data of the studied nurses and their total practice related to postpartum and newborn care, the current study revealed that there was highly statistically significant relation between total practice related to postpartum and newborn care of the studied nurses and job title, education level and years of experience. In addition, there was statistically significant relation with age. These results might be explained as; most of nurses who had satisfactory practice were held bachelor of nursing and had more years of experience. In addition, satisfactory practice were more encountered among nurses with age group 30-<40 years. These results agree with **Abd El-Galil et al. (2019)** who carried out a study about "Effect of Staff Development Program on Nurses' Performance Regarding Quality Standards of Neonatal Care" and revealed that there was highly statistically significant relation between nurses practice and their education level and years of experience.

The present study revealed that there was a positive correlation between total nurses' knowledge about postpartum period and its management and their total practice. This might be explained as, most nurses who had satisfactory level of practice, had good score of knowledge. These results agree with **El-Khawaga et al. (2019)** who

carried out a study about "Effect of Implementation of a Teaching Program about Immediate Postpartum Care on Nurses' Knowledge and Practice" and revealed that there was highly significant correlation between total practices of studied nurses and their knowledge. In addition, **Kamau (2019)** who carried out a study about "Assessment of Mothers' Satisfaction with Immediate Post Natal Care at Kenyatta National Hospital Maternity Unit" and reported that good level of knowledge among nurses was more encountered among those nurses with competent level of practice.

### **Conclusion**

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The majority of total knowledge of studied nurses had poor knowledge and unsatisfactory practical skills regarding postpartum period and its management.

### **Recommendations**

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Based on the findings of the present study, the following recommendations are suggested:

- Establishing plans for periodical and scheduled training courses and educational programs for nurses about postpartum period to improve nurses' knowledge and practices of postpartum care.

### **Further study**

Implement other Educational program for deferent area in maternity filed.

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