



## Impact of Intervention Program on Nurse's Knowledge and Practice Regarding Management of Fourth Stage of Labour and Pre Discharge Counseling

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**Abstract:** Background: the first 2 hours after birth are exciting and joyous as mother and baby get to know each other. Transitions from pregnancy to postpartum and from in utero to extrauterine life are also times of risk, even for seemingly healthy mothers and babies. Aims of this study, are to Improve and develop the skills & knowledge of the staff nurses in the management of fourth stage of labor, Plan, implement & evaluate an educational training program for upgrading nurses' knowledge and practice pertaining to the proper nursing intervention for women during fourth stage of labor and pre-discharge plan. Design, quasi- experimental design was used to the current research. Setting, The study was conducted at Zagazig University Hospital, Tools, two tools were used for data collection; structured interviewing quationnaire sheet, nurses knowledge quationnaire and Observational checklist for evaluation of management of fourth stage of labor. Results, results indicated that the score of nurse's knowledge and performance before and after the program implementation was satisfactory with statistically significant differences. The study concluded that, after repeated training, the staff nurses were able to fill the nursing assessment sheet and performed all the steps for the management of fourth stage of labor. Recommendations, Based on the results of this study, the following recommendations are suggested: in nursing practice, the instructions for the procedure and the nursing assessment sheet will help nurses develop their skills in the management of the fourth stage of work.

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**Key words:** Fourth stage of labor, Pre Discharge Counseling

### 1. Introduction

The fourth stage of labor was described as the first two hours following the birth. This begins shortly after the placenta is delivered and the postpartum phase commences. The woman should be closely monitored during this period because her body has just undergone a great many changes. The uterus makes its initial adjustment to the non-pregnant state. in this stabilization process, the uterus makes its initial readjustment to the non-pregnant state <sup>(1)</sup>. During this level, the primary goal is to prevent uterine atony haemorrhage and cervical or vaginal lacerations. It's a very crucial time for mom and baby alike. They both recover from the birth process but also get to know one another <sup>(2)</sup>.

**World Health Organization** <sup>(3)</sup> noted that the 4th stage is a time for the caregiver to regularly check the woman's physical well-being, her blood loss, feel if the uterus contracts, probably take her blood pressure and pulse, as well as test the woman's genitals for any tears or grazes, and put them in stitches if appropriate. Since there may be some life-threatening complications during the immediate postpartum period, It is vital that the treatment is properly

prepared and delivered during this time.

The process of labor and childbirth is usually straightforward, but complications often arise that would require urgent care. Potential fourth stage complications include PPH, hypovolemic shock, perineal hematoma growth, urinary retention, and infection. PPH accounts for about 35% of maternal mortality in the world, rising as high as 60% in some countries <sup>(1)</sup>.

**The American Academy of Pediatrics [AAP] & American College of Obstetricians and Gynecologists [ACOG]** <sup>(4)</sup>, clarified that; Careful ongoing assessment and timely action as appropriate improves safety; thus, no other tasks should be performed by the nurse who cares for the mother during the immediate postpartum recovery.

**World Health Organization** <sup>(5)</sup>, stated that; Fourth-stage nursing is intended to assist women in their initial adjustment to parenting. At this time it is important that the care is planned and administered

properly. Treatment focuses on the woman's clinical rehabilitation, her psychological well-being and her ability to care for herself and her new baby. It also explained the nurse's position during this time, including; accompanying mother and baby to the ward, Advise on postpartum treatment and hygiene, evaluate the mother's health to avoid any risks, enable the mother to feed, drink and rest. As well as urging the mom to clean her bladder to make sure she's passing urine. Report testing and providing any required care or prophylaxis.

### **Significance of the study**

A critical time is the fourth stage of the labor-process. It is necessary because there will be some life-threatening complications at this stage of labor. Minimizing these problems is a major obstacle for nurses (1). The maternity nurse of today is continually called upon to affirm physically as well as mentally the postpartum care for parturient mothers. Hence, it is important to provide the nurses with the maximum knowledge and training to manage the fourth stage of labor. The present research was carried out with the aim of improving the expertise of staff nurses in the handling of the fourth stage of labor, by providing them with adequate instruction.

### **Patients and Methods**

The goal of this study is to enhance and strengthen the skills & expertise of staff nurses in the management of the fourth stage of labor and assess the effect of a planned training program on the performance of nurses with regard to this management and pre-discharge counselling. To fulfill the aim of this study, the methodology was presented under the following four designs: technical, administrative, operational and statistical designs.

#### **A. Technical Design**

The technical design included description of the research design, study setting, sample, and tools for data collection.

#### **Research Design:**

A controlled quasi-experimental study design for nurses with pre-post evaluation to evaluate their knowledge and experience in fourth-stage labor management and pre-discharge counseling.

#### **Setting**

The present study was carried out at maternity hospital, at Zagazig University hospital. It is divided into five floors which classified as admission area, follow up & postnatal room, high risk area, pre-labor room including induction and PV, delivery room with nursery attached to it. The reasons given for choosing the above-mentioned setting, because it is Zagazig's main health center where women attend for delivery. Nurses working in the obstetric department also have significant continuing education needs.

### **Sampling**

Non probability purposive sampling technique was utilized.

The study population consisted of all staff nurses working in the maternity hospital of Zagazig University hospitals who have agreed to participate in the educational training program. These were thirty nurses with different years of experience.

#### **Tools of data collection:**

Two tools were used in this study, namely structured interview questionnaire and an observational checklist. These tools were used to collect data from each study subject in the study settings.

#### **Tool I Part I**

It includes, Socio-demographic data of nurses like age, years of experience, levels of education and if they received similar training program about management of fourth stage of labor in the past or not

#### **Part II**

#### **Nurses knowledge questionnaire:**

This involved open questions assessing nurse's knowledge regarding management of fourth stage of labor and pre discharge counseling

#### **Tool II ) Observational checklist for the management (Appendix II)**

The observational checklist was developed for evaluating the fourth stage of labor management. Researcher checked the nurses 'skills using the checklist. The checklist for observing the fourth stage of labor management procedure has been divided into six sections, i.e. Care provided immediately after delivery of the placenta before mother was transferred to the postnatal unit, immediately after mother was transferred to the postnatal unit and within one hour of transfer, and during the 2nd hour & pre-discharge assessment of mother and newborn.

For pre- and post-observation the researcher used the same checklist and compared the skill improvement on the basis of the same.

#### **B) Operational design:**

The operational design includes preparatory phase, validity, reliability and fieldwork.

#### **Preparatory phase**

This involves literature review, experimental experiments, and theoretical knowledge of various aspects of the research subject using books, journals, the internet, newspapers, and magazines. It has also helped to develop methods for the analysis.

#### **Validity and Reliability**

Tools were reviewed by a panel of five experts in the field of obstetrics and gynecological nursing to test its content validity. Modifications were done accordingly based on their judgment. Cronbach's alpha coefficient was calculated to assess the reliability of the developed tool through their internal consistency.

### C. Administrative Design.

An official permission was given by sending an official letter from Faculty of Nursing Zagazig University to the study setting's responsible authorities for obtaining their data collection permit.

#### Ethical consideration

In all phases of the study all ethical concerns were taken into consideration; the researcher maintained the subjects anonymity and confidentiality. She introduced herself to the nurses and briefly explained to every nurse the scope and aim of the study before attendance and nurses were voluntarily enrolled after the written informed consent process. Nurses were also informed that all information gathered during the study was confidential and used exclusively for research purposes, and had the ability to withdraw from the study whenever they wished.

#### The field study of this work was carried out on two phases:

**1- First phase:** data collection took a period of 4 months, from the 1<sup>st</sup> of May to the end of August, 2019. The researcher collected data daily during the whole week.

**2- Second phase:** the researcher prepared the contents of the educational sessions about the standard nursing guidelines for management of fourth stage of labor and methods of teaching. It was reviewed by experts in the same specialty. A pretest self-administered questionnaire and observation checklist was submitted to nurses. This was also used as post-test assessment. **A self-learning booklet** was prepared by the researcher using the recent and evidence based guideline for management of fourth stage of labor. It was used as a guide for them to upgrade their knowledge and practice

The educational program consisted of 2 sessions and the total time of the sessions was 4 hours. The number of nurses in each session was only 5 nurses in order to facilitate the learning process and allow every nurse to participate in the discussion as well as ensure adequate supervision. Sessions were conducted for nurses during the afternoon shift. The session started at 12pm and end at 2 PM. It was the most suitable time for the nurses after they have completed their duties.

The theoretical and training session were conducted together with a demonstration and re-demonstration for each element of care using simulation in the faculty of nursing lab or utilizing the available resources. Sessions were conducted in English because nurses elected were graduates.

**\*The general objective;** of the program was to upgrade nurse's knowledge and practice pertaining to management of fourth stage of labor.

**\*The specific objectives;** at the end of the sessions, nurses were being able to;

Be aware of the definition of fourth stage of

labor, steps of assessment or care and potential complications which may be developed during this period.

Be able to deliver proper nursing care for the woman during the fourth stage of labor and during discharge.

All nurses were tested using the same format for the pre-and post-test using the following score: **Scoring:** For each area of knowledge, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into a percent score, and means and standard deviations were computed. Knowledge was considered satisfactory if the percent score was 60% or more and unsatisfactory if less than 60%.

#### Observation checklist:

This form was used to record the nursing care provided for woman during fourth stage of labor. Score 1 was given for correctly done and score zero was given if the procedure was incorrectly done.

- Unsatisfactory: if less 60%
- Satisfactory: if 60% or more

#### Evaluation phase:

Evaluation of nurse's knowledge and practice regarding management of fourth stage of labor was done after the end of the program (post-test) and then repeated after three months to estimate the retention of the information and working with the program and the result was obtained using the above mentioned score.

#### \*Statistical analysis

All data were obtained, tabulated and statistically analyzed for Windows using SPSS 20.0 (SPSS Inc., Chicago, IL, USA 2011). Quantitative data were expressed as mean  $\pm$  SD & (range) and qualitative data as absolute frequencies (number) and relative frequencies (percentage) were expressed. Repeated measure Anova Test was used for comparing variables normally distributed between more than two dependent variables. Post hoc comparisons were used to compare pairs. All tests was two-sided. P-value < 0.05 was deemed statistically important (Sand p-value as 0.05 was deemed statistically insignificant).

### 3. Results

The table shows that (66.6%) of the studied group were high qualified nurses with the mean age (22.1 $\pm$ 0.73) ranged between 21-23 years old among all nurses included in the program. meanwhile, two fifth of them had a practical and technical experience more than 3 years.

Table 2 demonstrate developmental improvement in nursing performance during posttest and follow up period regarding practices of nursing care applied to

women Before shifting mother to the postnatal unit in all items respectively.

Table 3 indicate observable decline of nursing practices related to Immediate postpartum nursing care for mother and the newborn in the 1st hour in pretest especially in monitoring and recording the vital signs, Providing the prescribed medications, IV solution,

Wiping baby with wet cloth and dry, monitoring and recording apgar score and weighing the baby (56.7%, 36.7%, 56.7%, 50.0% and 56.7% respectively). although the same items show improvement in both posttest and follow up after application of the program among all nursing.

Table (1): socio demographic characteristics of the studied sample (n=30)

Items	No	%
<b>Age per years</b>		
21	6	20.0
22	14	46.7
23	10	33.3
Mean $\pm$ SD range		22.1 $\pm$ 0.73 21-23
<b>Qualification</b>		
Technical institute	10	33.3
Bachelor	20	66.6
<b>Years of experience</b>		
<3	18	60.0
3+	12	40.0

Table 2: nursing intervention applied before shifting mother to the postnatal unit at pre and post intervention program and at follow period

Before shifting mother to the postnatal unit:	Stage of study					
	Pre		post		Follow up	
	No.	%	No.	%	No.	%
Remove solid linens from delivery table	18	60.0%	29	96.7%	21	70.0%
Help mother to change her clothes and take comfortable position	17	56.7%	29	96.7%	27	90.0%
Provide sterile pad over the perineal Area	12	40.0%	26	86.7%	25	83.3%
Offer warm blanket to protect mother against chills	15	50.0%	26	86.7%	23	76.7%
Assist in the mother transfer to postnatal unit	15	50.0%	30	100.0%	27	90.0%

Table 3 immediate postpartum nursing care for mother and the newborn ( in the 1st hour). at pre and post intervention program and at follow period:

Immediate postpartum nursing care for mother and the newborn (in the 1st hour).	Stage of study					
	Pre		post		Follow up	
	No.	%	No.	%	No.	%
Monitor and record the vital signs	17	56.7%	24	80.0%	22	73.3%
Provide the prescribed medications, IV solution	11	36.7%	27	90.0%	24	80.0%
Observe the perineal area	21	70.0%	24	80.0%	23	73.3%
Observe lochia flow, color and odor	20	66.7%	23	76.7%	23	76.7%
Wipe baby with wet cloth and dry	17	56.7%	24	80.0%	23	76.7%
Monitor and record apgar score for 1 <sup>st</sup> and 5 <sup>th</sup> minute	15	50.0%	22	73.3%	21	70.0%
Ensure thermal protection-provide a warm Environment	18	60.0%	22	73.3%	22	73.3%
Weight the baby	17	56.7%	22	73.3%	22	73.3%
Provide cord care	23	76.7%	24	80.0%	23	76.3%
Provide eye care	21	70.0%	25	83.3%	24	80.0%
Establish maternal- neonatal bonding	20	66.7%	25	83.3%	25	83.3%

Table 4: predischarge counseling of the mother and family at pre and post intervention program and at follow period:

Pre discharge Counseling of the mother and family on:	Stage of study					
	Pre		post		Follow up	
	No.	%	No.	%	No.	%
Hand washing, general hygiene, and cord care	16	53.3%	25	83.3%	25	83.3%
Keeping the baby warm	14	46.7%	28	93.3%	24	80.0%
Danger signs for baby and mother; where to go if any danger signs occur	12	40.0%	28	93.3%	21	70.0%
Exclusive breastfeeding for first 6 months	13	43.3%	24	80.0%	24	80.0%
Healthy eating for the mother and iron supplementation	10	33.3%	26	86.7%	25	83.3%
Signs of postpartum depression and how to get help	16	53.3%	26	86.7%	22	73.3%
Follow-up care for the mother for any medical conditions	12	40.0%	28	93.3%	19	63.3%
Resuming sexual relations and ensuring safe sex	12	40.0%	22	73.3%	23	76.7%
Remind about: postnatal care, Baby's immunizations and family planning	13	43.3%	26	86.7%	25	83.3%

Regarding discharge counseling of the mother and family, table 4 indicate the defect in all advises and health education outlines applied for women in the pretest, which finally reflect satisfactory improvement

in both posttest and follow up period among studied group specially practice of baby warmth, Danger signs for baby and mother and Follow-up care (93.3%).

Table 5: Assessment Nurse's practice at pre, post intervention program and at follow up stage regarding fourth stage of labor among studied nurses group:

Items	Stage of study						Repeated measure Anova test	P
	pre		Post		Follow up			
	no	%	no	%	no	%		
<b>Immediate after placenta delivery</b> Mean± SD Range	3.13±1.47 0-6		5.47±0.89 3-6		5.27±0.98 3-6		35.9	0.0001
<b>Before shifting to postnatal unit</b> Mean± SD Range	2.56±1.5 0-5		4.43±0.82 2-5		4.1±1.02 2-5		21.9	0.0001
<b>Care first hour</b> Mean± SD Range	7.4±3.1 0-12		9.6±2.5 4-12		9.2±2 5-12		6.3	0.003
<b>Care second hour</b> Mean± SD Range	9.86±4.5 0-1		12.36±3.28 4-15		11.8±3 3-15		3.5	0.035
<b>Pre discharge</b> Mean± SD Range	2.06±2.16 0-5		4.3±0.87 2-5		3.9±1.56 1-5		13.9	0.0001
<b>Counseling</b> Mean± SD Range	4.3±4.4 0-10		8.6±1.95 4-10		7.7±2.2 4-10		16.8	0.0001

Table 5 shows, statistically significant improvements at both the post and follow-up phases regarding practice applied Immediate after placenta delivery, Before shifting to postnatal unit, Pre discharge intervention and Counseling (p= 0.0001).

however, nursing care practice applied in the first and second hour partially improved in posttest and follow up period without statistical significant difference (p=0.003, p=0.035respectively).

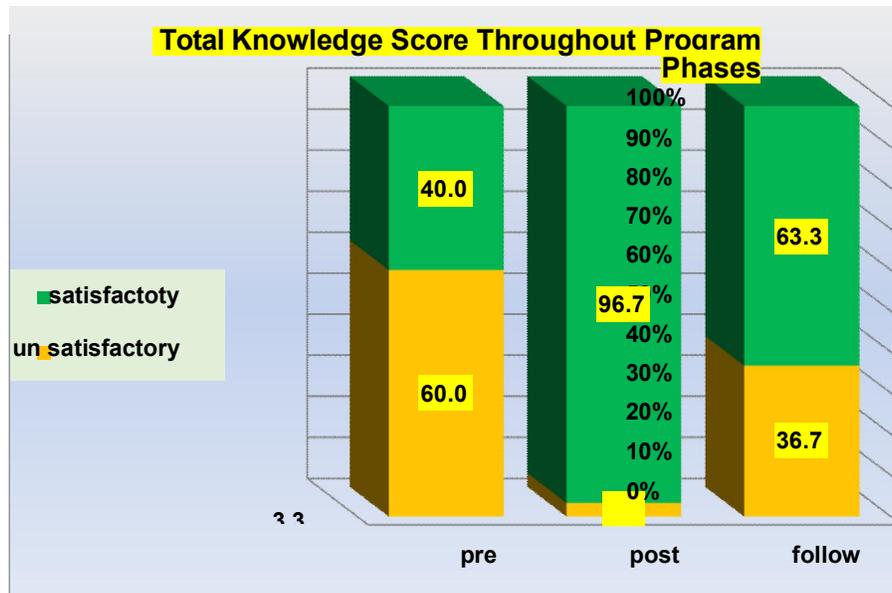


Figure (1): knowledge level about care of fourth stage of labor among studied group at pre and post intervention program and at follow period

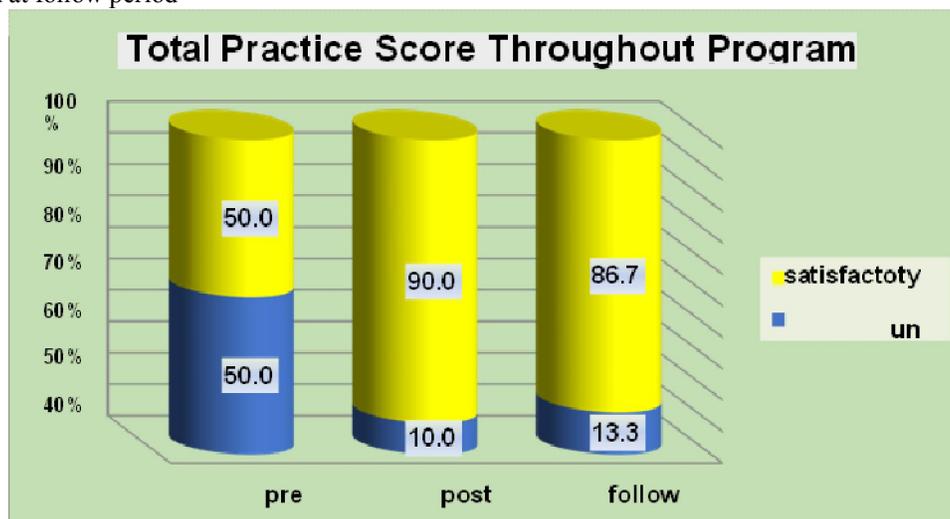


Figure (2): Practice level about care of fourth stage of labor among studied group at pre and post intervention program and at follow period

Figure 1 displays the result of the nurse's total satisfactory knowledge score throughout the program phases. It points to statistically significant improvements at both the post and follow-up phases from 40.0% at the pretest to 96.7% and 63.3% at the

posttest and follow up phases. Thus, despite the observed some decline, the level at the follow-up phase was still statistically significantly higher than the pre-program levels.

**Table 6:** mean difference of practice score at pre, post intervention program and at follow up stage regard fourth stage of labor among studied nurses group:

Observation	Stage Of Study	Mean Difference	Std. Error	Sig.
Post	pre	15.367*	2.786	0.0001(S)
	Follow up	3.233	1.867	0.094(NS)
Follow up	pre	12.133*	3.025	0.0001(S)

S=Significant<0.05

NS=Non-significant<0.05

Table 6 represents a measure of the subjects' mean output score across all phases of the programme. Post-test evaluation was considerably better success score than evaluation of pre-implementation. Also, in the follow up phase, the nurse's performance score was significantly higher than pretest observation ( $p = 0.0001$ ).

Figure 2 illustrates the change in the score of nurse's performance before and after the program implementation. It is evident that the total score of good practice was low before the program (50.0%). After the program implementation statistically significant improvement was revealed in total score of good practice (90.0%) in favor of the post-test. At the follow-up phase, the percentages of nurses with satisfactory practice declined in all areas (86.7%), but remained higher than the pre-program levels in almost all areas, also with statistical significant difference.

#### 4. Discussion

This has been confirmed by *World Health Organization (WHO)* <sup>(3)</sup> who stated that; For both mother and baby the fourth stage of labor is the most critical period. Both are not only healing from the actual process of birth but also getting to know each other. During this process the maternal organs undergo initial re-adjustment to the non-pregnant state, and the functions of the body begin to stabilize. During the fourth stage of labor, there may be some possible complications such as PPH, hypovolemic shock, perineal hematoma formation, urinary retention and infection, etc. The goal of this study was to develop the skills of staff nurses in managing the fourth stage of labor at Maternity Hospitals at Zagazig University.

It was noticed during clinical posting that, despite the fact that the fourth stage is such an important stage to be handled, the staff nurses did not follow the steps to properly manage the fourth stage of labor. Since nurses play a vital role in a healthcare system, it was necessary to develop protocol and certain standards by following which they can provide patients with quality nursing care. The study's first step involved assessing the individual staff nurse's standard practices for handling the fourth stage of labor without providing any guidance using the observational checklist.

Registered nurses were trained using the instructions for the procedure, and information was provided on filling out the nursing assessment sheet. After that, the performance of the staff nurses was assessed after each training session. Once each training session was finished, reinforcement was done in the form of redemonstrations (especially for the steps left by the nurses) on the management of the fourth stage of labor. Similarly, the repeated trainings

were done (post & follow up observations) till the subjects achieved maximum skill. The nurses were informed about the observations.

Concerning socio-demographic characteristics of the staff nurses who were involved in the study, it was revealed that (66.6%) of the studied group were high qualified nurses with the mean age ( $22.1 \pm 0.73$ ) ranged between 21-23 years old among all nurses included in the program. meanwhile, two fifth of them had a practical and technical experience more than 3 years. This is in conversely with (1) in Chandigarh, who reported that, the majority of the subjects were in the age group of 26-30 year resulting in the mean age of  $30.96 \pm 5.3$  years. More than half of the subjects were Graduate in nursing (60%) and forty percent of the subjects were having experience of 6-10 years.

Also, **Jawadul Haque et al** <sup>(6)</sup> in their study " Knowledge About Management of Different Stages of Normal Labour in Bangladesh" reported that the majority (54.1%) were in the age group of 30-39 years and 32.7% were in the age group of 40-49 years. The mean age of the respondents was  $37.39 \pm 5.78$  years. About 51.4% of the nurses had Diploma in midwifery, while 24.1% had BSc in public health nursing. The educational level should be improved among the nurses through motivation. this may be related to the large sample size and the regional differences.

Concerning nursing intervention applied before shifting mother to the postnatal unit, this study revealed that developmental improvement in nursing performance during posttest and follow up period. This was in accordance with (1) who reported that; during the posttest observation all the subjects performed all the steps correctly as a result of regular assessment and reinforcement throughout the practical period.

This study indicate observable decline of **nursing practices related to Immediate postpartum nursing care for mother and the newborn** in the 1st hour in pretest especially in monitoring and recording the vital signs, Providing the prescribed medications, IV solution, Wiping baby with wet cloth and dry, monitoring and recording apgar score and weighing the baby (56.7%, 36.7%, 56.7%, 50.0% and 56.7% respectively). Although the same items show improvement in both posttest and follow up after application of the program among all nursing. This finding is also consistent with <sup>(7)</sup> who reported that, Only a few subjects had followed the steps of handling the fourth stage of labor during pre-observation and none of the subjects had reported the amount of pads soaked with bleeding p / v, which is one of the most critical measures in assessing the PPH patient. None of the subjects maintained the mother's intake / output record and documented the height of the funds before

and after patient urinate. After training in subsequent tests, nurses' skills improved and all of them performed all the steps showing that nurses' performance to handle the fourth stage of labor has been enhanced with training and daily encouragement.

As for **the nurse's practice at pre, post intervention program and at follow up stage regarding fourth stage of labor**, there was statistically significant improvements at both the post and follow-up phases regarding practice applied immediately after placenta delivery, Before shifting to postnatal unit, Pre discharge intervention and Counseling ( $p=0.0001$ ). However, nursing care practice applied in the first and second hour partially improved in posttest and follow up period without statistical significant difference ( $p=0.003$ ,  $p=0.035$ ) respectively. This was similar to <sup>(1)</sup> who observed that Many of the subjects did not follow all the steps of handling the fourth stage of labor during pre-observation. Many studies which reported that many complications occur during the immediate postpartum period as a result of lack of proper nursing management showed almost similar results. A study by **Marshall et al** <sup>(6)</sup> revealed that most of the health problems were found during immediate postpartum and are often ignored. Finally there was significantly better performance score among nurses during post observations than pre implementation observation.

The result of the **nurse's total satisfactory knowledge score** throughout the program phases. This study points to statistically significant improvements at both the post and follow-up phases from 40.0% at the pretest to 96.7% and 63.3% at the posttest and follow up phases. This was in accordance with **Simpson et al** <sup>(9)</sup> who reported that almost all the staff nurses had poor knowledge and skills regarding management of the fourth stage of labor before demonstration and guidelines. After repeated training, the staff nurses were able to fill the nursing assessment sheet and performed all the steps for the management of fourth stage of labor.

An significant consequence of the above result was to shed light on the nursing recommendations for improving women's recovery during the fourth stage of labor. The recommendations included postpartum treatment based on the best evidence available. The researcher hoped that these recommendations would help to translate existing knowledge into action, and would encourage future investigations.

### Conclusion

The research offered important insights into the knowledge and practice of nurses in handling the fourth stage of labor. Based on the findings of the present study, This can be concluded that the abilities of professional nurses can be greatly strengthened by

these training programmes. Nearly all staff nurses had minimal experience and expertise in managing the fourth stage of labor, before demonstration and guidance. After intensive preparation, the staff nurses were able to complete the nursing assessment sheet and followed all the steps to manage the fourth stage of labor. The study also revealed a grim picture of the skills of nurses, which makes up a significant proportion of the health care system in Zagazig. Hence, a large-scale longitudinal analysis that covers all variables associated with nurses' experience.

### Recommendations

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

- ❖ Evidence-based recommendations should be used by maternity nurses to help integrate existing knowledge into action, align postpartum treatment for puerperal mothers.

- ❖ Intrapartum assessment and counseling of parturient mothers on alleviation of anxiety and clearing up myths are important for minimizing postpartum discomfort, avoiding complications and optimizing postpartum recovery.

- ❖ The educational program which has been introduced to improve the knowledge and practice of nurses and which has proved successful should be incorporated into the in-service education program at the study setting and similar ones.

- ❖ Additional research may be applied in other settings to the labor room. For an extended period of time, a study can be performed on a wide number of samples, including community setting, and further research can be done with an updated Nursing Evaluation Sheet and a wider framework procedure on the fourth stage of operation.

- ❖ In nursing education, the instructions for the procedure and the nursing appraisal sheet will help nurses improve their skills in the management of the fourth stage of labor. During the fourth stage different life-threatening conditions can be identified and handled in a timely manner. Health department, hospital administrators should take steps to encourage nursing evaluation sheet and management.

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