ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

The Effect of the Competency Based Education Model on Nurses' Performance Regarding Active Management of Second Stage labor

Soad Mohamed Abd EL fattah[1], Shaimaa Hassan Mohamady[2]

1) *Instructor of Maternity and Neonate Health Nursing -Faculty of Nursing- Modern University of Technology and Information, Egypt.*
2) *Professor of Maternal and Newborn Health Nursing- Faculty of Nursing- Helwan University, Egypt.*

Abstract

Background: Clinical nursing competence is the capacity to apply care for second stage of labor by integrating information, skills, attitude, beliefs, and experience. It reflects the nursing professional's feelings, ideas, and judgment. Active management of second stage of labor is a vital possession for nurses to prevent complication during labor. **Aim of study**: to evaluate the effect of competency based education model on nurses' performance regarding active management of second stage of labor. **Design**: Quasi experimental design was used. **Setting**: The study was conducted in labor unit at Rofyda Maternity Hospital at Sheikh Zayed, Cairo, Egypt. **Sampling:** A purposive sample 30 nurses according to inclusion and exclusion criteria. **Tools:** Five tools for data collection were used. **First tool:** a structured interviewing questionnaire included nurses' personal characteristics. **Second tool:** Nurses competency knowledge assessment checklist. **Third tool:** Nurses competency practices assessment checklist. **Forth tool**: Nurses' attitude toward competency education model. **Fifth tool:** Nurses' satisfaction toward educational sessions regarding active management of second stage of labor. **Results:** the majority of the studied nurses had competent regarding level of competency practice of second stage of labor post implementation of competency based educational sessions regarding active management of second stage of labor with highly statistically significant difference in nurses' performance in pre and post implementation of competency based educational sessions. The majority of nurses had positive attitude post competency-based educational model. **Conclusion**: The implementation of the competency-based educational model improved nurses' performance regarding second stage of labor. **Recommendation**: Develop competency based training courses for nurses working at labor room regarding care of different maternity nursing subjects.

Keywords: *Competency Educational Session, Nurses' Performance, Second Stage of Labor.*

Introduction

The second stage of labor is generally considered to be an intensive part of labor for mother and baby. The second stage of labor is defined as the time from full cervical dilation until the birth of the baby and includes expulsive uterine contractions leading to an involuntary urge to bear down **(Teleman et al., 2022)**

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Prolonged the second stage increases maternal morbidity, including third and fourth-degree perineal lacerations, urinary retention, postpartum haemorrhage, caesarean sections and chorioamnionitis so the optimum nursing management of the second stage of labour remains a challenge, for the needs of finding a balance between optimal maternal and neonatal outcomes and minimization of unnecessary interventions **(Nilsson et al., 2022)**

The second stage of labour is a time for one to one nurse/ mother ratio. Nursing roles during the second stage include providing continuous comfort measures such as position changes and providing a quiet, focused environment, instructing the woman on the following bearing-down positions and techniques, pushing only when woman feels an urge to push, using abdominal muscles when bearing down, using short pushes of 6 to 7 seconds, focusing attention on the perineal area to visualize the newborn and conserving energy between contractions and monitoring fetal status **(Murray & Gayle Huelsmann 2020).**

Competency-based education (CBE) is a concept, a philosophy, and an approach to educational design where learner professional progression occurs only when competency is demonstrated. A competency is a characteristic or feature of an individual. It is an observable ability of a health professional to do something successfully or efficiently. CBE is applicable to all health professions such as medicine, pharmacy, nursing, dentistry, and veterinary medicine **(Timmerberg et al., 2022).**

Nursing competence is defined as the capacity of a nurse to successfully exhibit a range of qualities, including personal traits, values, attitudes, knowledge, and abilities, which are necessary to carry out professional responsibilities. Also competency-based orientation places a strong emphasis on the nursing interns' capacity to carry out the role expectations for which they have been hired. High levels of professional competence among nursing interns are linked to better patient outcomes **(Sarwar et al., 2023)**

Nurse competence maintenance is a continuous process of improving knowledge, attitudes, and skills. The competence of nurses can be improved through continuous professional development. The effectiveness of nursing care is dependent on nurses' competence, which is essential to the standard of care and patient safety. The level of education attained by nurses is essential to the development of nursing competency **(Rahmah et al., (2022).**

Competent nurses have technical skills and will be able to provide continuous labor support, to intermittently auscultate the fetal heart tones, and to used different technology systems to collect data; nurses communicate, exchange and use data in a timely manner; coordinate care; and improve patient safety. Competent nurses will work to eliminate preventable harm by engaging in critical thinking. Nurses interpret symptoms, plan care to alleviate complications, and optimize the childbearing woman's physical, psychological, and spiritual health **(Ali et al., 2023).**

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Significance of the study

The rate of overall adverse outcomes of prolonged second stage of labor increased rapidly from 20% in subgroup ≤ 1 hour, 30.7% in 1-1.9h, 38.5% in 2-2.9h, to 61.2% in 3-3.9h، 69.9% in ≥4 hours of second stage of labor. Prolonged second stage of labor is owing to the increase of referral cesarean delivery with prolonged second stage and decrease of vaginal deliveries (**Hongxia et al., 2020).**

The risk of maternal adverse outcomes increased for every additional hour, in referral cesarean delivery, instrumental delivery, postpartum hemorrhage, lacerations, hospitalization stay ≥90th. It also should be noticed that the prolonged second stage was an independent risk factor for adverse neonatal outcomes, in low Apgar score at 5 minutes, neonatal resuscitation, assisted ventilation and admission to neonatal intensive care unit. **(Wang et al., 2020).**

Complications were more common after prolonged second stages than after normal second stages for women giving birth in birth centers. Multiparous women with second stage labors over 2 hours were more likely to be experience postpartum hemorrhage (15.0% vs 9.7%), retained placenta (2.5% vs 1.2%), maternal fever (0.7% vs. 0.3%), and severe perineal lacerations (3.9% vs. 0.9%) **(Ren et al., 2022).**

Aim of the study

The aim of this study to evaluate the effect of competency based education model on nurses' performance regarding active management of second stage of labor through the following objectives:

1. Assess nurses' knowledge regarding active management of second stage of labor.
2. Assess nurses' practice regarding active management of second stage of labor.
3. Implement competency based educational sessions regarding active management of second stage of labor.
4. Evaluate the effect of competency based educational sessions regarding active management of second stage of labor.
5. Assess nurses' attitude regarding competency based educational sessions regarding active management of second stage of labor.
6. Assess nurses' satisfaction toward educational session regarding active management of second stage of labor.

Research hypothesis

The effect of competency based education model will be improved performance of nurses regarding active management second stage of labor.

Subjects and Methods

Research Design:

A quazi experimental research design was utilized in the current study. It is an empirical study used to estimate the causal impact of an intervention on its target population without random assignment (**Chang et al., (2022).** (One-group pretest–post-test design to develop and implement a competency-based education model and verify its effects).

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Research setting:

The study was conducted in labor unit to collect data from Rofyda Maternity Hospital in Rofyda Health Park at Sheikh Zayed, Cairo, Egypt.

Subjects:

Nurses who work at labor room only (scrub nurse).

Sampling type:

A purposive sample was selected according to inclusion and exclusion criteria.

Sample size:

30 nurses (Nurses at labor unit) were included in the study for 4 months.

Sample criteria:

Inclusion criteria for nurses:

Nurses responsible for direct nursing care at labor unit

Exclusion criteria for nurses:

Any nurse who is outside labor area and circulating nurse.

Tools for data collection:

Five tools of data collection used as following.

Tool I: Interview questionnaire sheet for nurses.

This tool was constructed by the researcher after reviewing of literature (**Li et al., 2022**) in English language to suit the nurses `level of education based on review the literature putting into considerations the aim of the study and the data needed to be collected from the subjects. This tool was used to assess personal characteristics for nurses such as age, residence, level of education, years of experience, daily working hours and training courses about nursing management based on competence.

Tool II: Nurses competency knowledge assessment sheet:

The tool was used to assess nurses' knowledge regarding second stage of labor such as definition, signs and symptoms, duration, phases, maternal position, method of pushing and techniques for preventing perineal trauma during second stage of labor. The Questionnaire was contained of (8) open ended questions. It was designed by researcher after reviewing of the related literature **(WHO 2018)** in English to suit the nurses' level of education.

The scoring system of this part:

A scoring system was followed to assess nurses' knowledge about second stage of labor. The Questionnaire was contained of (8) questions, the total scores of the questionnaire were (24) grades, the correct complete answer was scored as (3) point, the correct incomplete answer was scored as (2) point and the incorrect answer was scored as (1) point. These scores were summed and were

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

converted into a percent score **(Abu Sera 2022).**

Level of knowledge-

Satisfactory: knowledge if score ≥ 60%. (≥ 15 grades)-

Unsatisfactory: knowledge if score < 60%. (<15 grades).

Tool III: Nurses competency practices assessment checklist

It was adapted from **(WHO 2020)** and modified by researcher. The tool used to assess nurses' practices regarding active nursing management second stage of labor such as **emotional support during second stage** (3 statements), **Safety / Infection Prevention & Control during second stage** (4 statements), **care of the women through the second stage of labor and birth** (10 statements) and **one statement about documentation.**

The scoring system of this part:

The checklist consisted of 18 statement divided to four sections as emotional support (3 statements), Safety / Infection Prevention & Control (4 statements), care of the women through the second stage of labor and birth (10 statements) and 1 statement documentation. The scoring system was calculated as: (0) for not done, (1) for done. The questionnaire was evaluated giving a score of 0-18 **(Abu Sera (2022). Incompetent practice**: if score ≥ 60% (≥ 11 grades) **Competent practice**: if score < 60% (< 11 grades).

Tool IV: nurses' attitude toward competency education model.

It was designed by researcher after reviewing of the related literature **(Zhang et al., 2022)** in English to suit the nurses `level of education. It is consisted of 12 statements that include simplicity of competency education model that used, effectiveness of competency education model in quality of care improvement, effectiveness of competency education model in increasing mother`s quality of care, effectiveness of competency education model in increasing quality of care cohesion, effectiveness of competency education model in saving nurses' time and effort, accuracy of competency education model compared to other models, completeness of competency education model's content compared to models, effectiveness of competency education model's content in increasing nurses' level of knowledge, effectiveness of competency education model's content in organizing nurses' interventions, effectiveness of competency education model's content in prioritizing mother care and problems, effectiveness of competency education model's content in preventing fault and mistake show by nurses and effectiveness of competency education model's content in proper and correct decision making

The scoring system of this part:

The scoring system was calculated as: (1) for disagree, (2) for Neutral and (3) for agree. The questionnaire was consisted of 12 statements and it was evaluated giving a score of 12 –36 then divided as negative attitude if total score was calculated as (score <22) percentage (<60%) and positive attitude if total score was calculated as (score 22-36) percentage (≥60%). Disagree: <50% Neutral: 50-60% Agree: >60%

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Tool V: Nurses' satisfaction Likert scale:

It was utilized to assess nurses' satisfaction toward educational sessions regarding active management of second stage of labor using this scale which developed by the researcher after reviewing of the related literature **(Chen et al., 2022)** in English to suit the nurses' level of education. It consists of six items that include the teaching methods used in the educational sessions were helpful, effective and improve knowledge, the teaching methods used in the educational sessions were simple & clear, the teaching methods used in the educational sessions met nurses' expectations and enjoyed with it, teaching materials used in the educational sessions were suitable and motivated to learn, the instructors in the educational sessions utilize suitable situations for emergency cases and recommended the current teaching method to other lectures and course in the future.

The scoring system of this part:

This scale was utilized three points for assessing level of nurses' satisfaction, for satisfy take (2), uncertainly take (1) and not satisfy take (0), the total degree score was ranged from 6 to 12. **(Gaheen & Abo-Hatab 2021).**The high score means higher satisfaction.

Satisfaction Not Satisfy: <50%. Satisfy to some degree: 50-60%. Satisfy: >60%.

Supportive material:

Booklet was designed by researcher that contain the competency based education model and active management of second stage labor based on current national and international related literatures using books, articles and scientific magazines. This was written in simple Arabic and English language.

Validity

The revision of the tools for clarity, relevance, comprehensiveness, Applicability and understanding was done by a panel of three expertise to measure the content validity of the tools. Experts' opinions elicited regarding the format, layout, consistency, accuracy and relevancy of the tools.

Reliability

Reliability was assessed by using alpha Cronbach which is the most common measure of internal consistency: **Knowledge** (0.894), **Practice** (0.896), **Attitude** (0.784), **and Satisfaction** (0.815)

Pilot study

Pilot study was carried out on 10% (3) of nurses under the study to test the applicability, clarity, and the efficiency of the tools. It also aimed to ensure simplicity, relevance, and feasibility of conduction of the study tools. In addition, it helps in estimation of the time needed to collect data and determine the obstacles. No necessary modifications were carried out and tools finalized, so nurses in pilot study were included in the study sample.

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Field work

The collection of data lasted over a period of 4 months: the current study started at beginning of April 2023 and end of August 2023, through the following phases:

Assessment phase

- The researcher visiting the labor unit of Rofyda hospital three day per week (two days from 10 am to 6 pm and one day from 3 pm to 8 pm) and as needed when entering a new laboring woman to assess nurses' practices.
- The study was conducted in cooperation between the medical team and the nursing team, after a full explanation of the importance and aim of the research study, guidance and essential to be up to date.
- The researcher starting the interviewing process to fill personal characteristics which took about 5-10 minutes
- The data collected by using interviewing questionnaire tool to identify their knowledge and practice about second stage of labor for 10-20 minutes pre educational session
- The researcher starting to assess nurses' practices through entering to labor unit with nurses to evaluate their nursing skill during second stage of labor as pre educational sessions by using observational checklist practices.
- The researcher starting to assess nurses' attitude toward competency based educational model regarding active management of second stage of labor as pre educational sessions.
- The researcher determined the time table of sessions, teaching methods media (Booklet) used and learner's activities.

Implementation phase

- After ending from pre assessment of nurses' knowledge, practices and attitude. The researcher start educational sessions after one week from assessment.
- The teaching sessions were conducted in the room of nurses' rest beside the labor unit of Rofyda hospital, the room was conditioned, quiet, had adequate lighting, well ventilated and furnished and had adequate spacing for the place for implementing educational sessions guidelines
- The Educational sessions were implemented for nurses during their official working hours at their break time, in the morning and evening shift on nurse station.
- Each session took approximately 25 minutes to 30 minutes.
- Motivation and reinforcement techniques as praise and recognition during program sessions were used. Also, nurses were reinforced through online group discussions and videos to enhance their learning.
- Each nurse obtained a copy of the educational booklet that included all the training contents; the educational booklet help nurses understand and memorizing of the contents.
- Total number of the sessions of educational was 7 sessions (3 knowledge session and 4 practical session). The duration of each session was 25-30 minutes.
- These sessions were conducted for small group; each group number didn't exceed two nurses and according nurses' work load and surrounding circumferences

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Theoretical part included:

Three sessions for Theoretical part:

- Each session started by greeting the nurses, assessing nurses' motivation for learning, getting feedback about what was given through the previous session, taking into consideration using simple language to suit the educational level of the nurses.
- **The first session,** the researcher explained to the studied nurses about the purpose of the educational sessions and educational sessions agenda, definition competency based education model, features of competency based education model and differentiate between competency based education model and traditional education system which took about 25-30 minutes.
- **The second session,** the researcher explained to the studied nurses about definition the second stage of labor, signs and symptoms of second stage of labor, duration of second stage of labor and phases of second stage of labor which took about 25-30 minutes.
- **The third session,** the researcher explained to the studied nurses about pushing technique, position, how to prevent perineal trauma during second stage of labor and complication of second stage of labor which took about 25-30 minutes.
- After ending of educational session, the researcher assessed nurses' knowledge as posttest after explaining content of booklet as posttest mainly after one week by using nurses' competency knowledge assessment sheet that used before.

Practical part included

Four sessions for practical part:

- **The first practical session,** the researcher explained to the studied nurses about nurse role during second stage of labor which took about 25-30 minutes.
- **The second practical session,** the researcher explained to the studied nurses about emotional support to women during second stage of labor. The first session take time from 25-30 minutes.
- **The third practical session**, the researcher explained to the studied nurses about safety / infection prevention & control during second stage of labor. The one session take time from 25-30 minutes.
- **The fourth practical session,** the researcher explained to the studied nurses about care of the women through the second stage of labor and birth and documentation. The one session take time from 30-40minutes.
- After ending of educational session, the researcher starting to reassess nurses' practice through entering to labor unit with nurses to evaluate their nursing skill during second stage of labor as posttest mainly after one week by using observational checklist practice that used before.
- After ending of educational session, the researcher starting to assess nurses' attitude toward competency based educational model regarding active management of second stage of labor as posttest mainly after one week.
- After ending of educational session, the researcher starting to assess nurses' satisfaction toward educational sessions regarding active management of second stage of labor.

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Evaluation phase

The evaluation phase emphasized on determining the effect of competency based education model on nurses' knowledge, practices, attitude and satisfaction regarding active management of second stage of labor through comparing results pre and post using the previously mentioned tools was well and satisfactory. The researcher had applied posttest after one week from pretest because of nurses' circumstances and number of laboring women.

Ethical considerations:

An official permission to conduct the proposed study were obtained Faculty of Nursing Helwan University from the Scientific Research Ethics Committee. Informed consent was obtained from nurses prior to data collection, the nurses were informed about the purpose and the expected outcomes of the study and nurses should be assured that, the study is harmless an participation is voluntary and they have the right to withdraw from the study at any time without giving any reason. Nurses also were assured that, anonymity and confidentiality was guaranteed, as well the gathered data was used for the research purpose only. Ethics, values, cultures and beliefs were respected.

2.11 Statistical analysis:

Recorded data were analyzed using the statistical package for social sciences, version 23.0 (SPSS Inc., Chicago, Illinois, USA). Quantitative data were expressed as mean± standard deviation (SD). Qualitative data were expressed as frequency and percentage.

Table (1): shows that mean age of the studied nurses (25.93 ± 4.40). Majority of the studied nurses had bachelor's degree (80%). About two third of the studied nurses had years of experience between 1-5 years (60%)**.**

Table (2) reveals that there was highly statistically significant improvement in nurses' knowledge regarding second stage of labor after implementing educational session regarding active management of second stage of labor.

Figure1: **revealed that** in the post educational sessions phase, majority of the studied nurses had satisfactory regarding level of knowledge about second stage of labor (86.7%).

Table (3) reveals that there was highly statistically significant improvement in nurses' competency practice regarding emotional support during second stage of labor after implementing educational sessions regarding active management of second stage of labor. Majority of studied nurses had correct answer (done) regarding Provide emotional support and reassurance, and keep the woman and family informed throughout birth and during the immediate care for newborn (80.0%) in the post educational sessions phase. Also. There was highly statistically significant improvement in nurses' competency practice regarding safety / infection prevention & control during second stage of labor after implementing educational sessions regarding active management of second stage of labor. More

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

than two third of studied nurses had correct answer (done) regarding wear a clean plastic or rubber apron, rubber boots, and eye goggles (73.3%) in the post educational sessions phase.

Table (4) revealed that there was highly statistically significant improvement in nurses' competency practice regarding care of the women through the second stage of labor and birth during second stage of labor after implementing educational sessions regarding active management of second stage of labor. More than two third of the nurses had correct answer (done) regarding instruct women about method of pushing during second stage of labor and to take a deep breath at the beginning of a contraction and then hold it and bear down throughout the contraction (73.3%) in the post educational sessions phase. Also. There was highly statistically significant improvement in nurses' competency practice regarding documentation during second stage of labor after implementing educational sessions regarding active management of second stage of labor. More than two third of the nurses had correct answer (done) regarding duration of second stage (66.7%) in the post educational sessions phase.

Figure (2): **revealed that** there was highly statistically significant improvement in nurses' competency practice after implementing educational sessions regarding active management of second stage of labor. In the pre educational sessions phase, less than one quarter of the studied nurses had competent regarding level of competency practice of second stage of labor (23.3%), in the post educational sessions phase, more than two third of the studied nurses had competent regarding level of competency practice of second stage of labor.

Figure (3): **shows that** the attitude of the studied nurses of the competency based educational model about the second stage of labor. In the pre educational sessions phase, minority of the studied nurses had positive attitudes regarding competency based educational model less than quarter (6.7%). In post educational sessions, about two third of the studied nurses had ad positive attitudes regarding competency based educational model (63.3%)

Table (5): shows that there was highly statistically significant improvement in nurses' attitude after implementing competency based educational sessions about the second stage of labor. More than two third of the studied nurses had agree answer regarding effectiveness of competency education model in quality of care improvement. (73.3%).

Figure (4): shows that satisfaction of the studied nurses of the competency based educational sessions about the second stage of labor, about one third of the studied nurses had not satisfy regarding to educational sessions regarding active management of second stage of labor after implementation of nursing program (30%), more than two third of the studied nurses had satisfy regarding toward educational sessions regarding active management of second stage of labor after implementation of educational sessions (70%).

Table (6): shows that there is a highly statistically significant positive correlation between the studied nurses' total competency knowledge and nurses' total competency practice and attitude post

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

implementation of competency based educational model. In addition to there is a highly statistically significant positive correlation between the studied nurses' total competency practice and nurses' total competency knowledge and there is a statistically significant positive correlation between the studied nurses' total competency practice and nurses' attitude post implementation of competency based educational model.

Table (1): Distribution of the studied nurses according to their personal characteristics (N=30).

Personal characteristic	**No.**	**%**
Age (years)		
18-<24 years	16	53.3
24-<29 years	6	20.0
29-<39 years	8	26.7
Mean±SD	25.93±4.40	
Residence:		
Rural	10	33.3
Urban	20	66.7
Level of education:		
High school diploma	2	6.7
Technical institute certificate	4	13.3
Bachelor's degree	24	80.0
Years of experience		
1-5 years	18	60.0
5-<10 years	6	20.0
10-<15 years	4	13.3
15-≤20 years	2	6.7
Daily working hours:		
8 hours	2	6.7
12 hours	16	53.3
>12 hours	12	40.0
Training courses about nursing management based competence		
Yes	9	30.0
No	21	70.0

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Table (2): Distribution of the studied nurses according to their knowledge about the second stage of labor (N=30).

Items	Pre-educational sessions (n=30)						Post-educational sessions (n=30)						Chi-square test	
	Incorrect & incomplete		Correct & incomplete		Correct & complete		Incorrect & incomplete		Correct & incomplete		Correct & complete			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	x^2	p-value
Definition of second stage of labor.	4	13.3	6	20.0	20	66.7	2	6.7	0	0.0	28	93.3	8.000	0.018*
Signs and symptoms of second stage	14	46.7	12	40.0	4	13.3	2	6.7	6	20.0	22	73.3	23.462	<0.001**
Duration of second stage of labor	14	46.7	6	20.0	10	33.3	0	0.0	2	6.7	28	93.3	24.526	<0.001**
Phases of second stage of labor	30	100.0	0	0.0	0	0.0	0	0.0	2	6.7	28	93.3	60.000	<0.001**
Maternal position during second stage of labor	18	60.0	12	40.0	0	0.0	0	0.0	4	13.3	26	86.7	48.000	<0.001**
Method of pushing during second stage of labor	22	73.3	8	26.7	0	0.0	10	33.3	6	20.0	14	46.7	18.786	<0.001**
Techniques for preventing perineal trauma	12	40.0	16	53.3	2	6.7	0	0.0	6	20.0	24	80.0	35.161	<0.001**
Complication of second stage of labor	6	20.0	18	60.0	6	20.0	0	0.0	6	20.0	24	80.0	22.800	<0.001**

x^2: Chi-square test. P-value >0.05 Non significant; *p-value <0.05Significant; **p-value <0.001 Highly Significant.

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

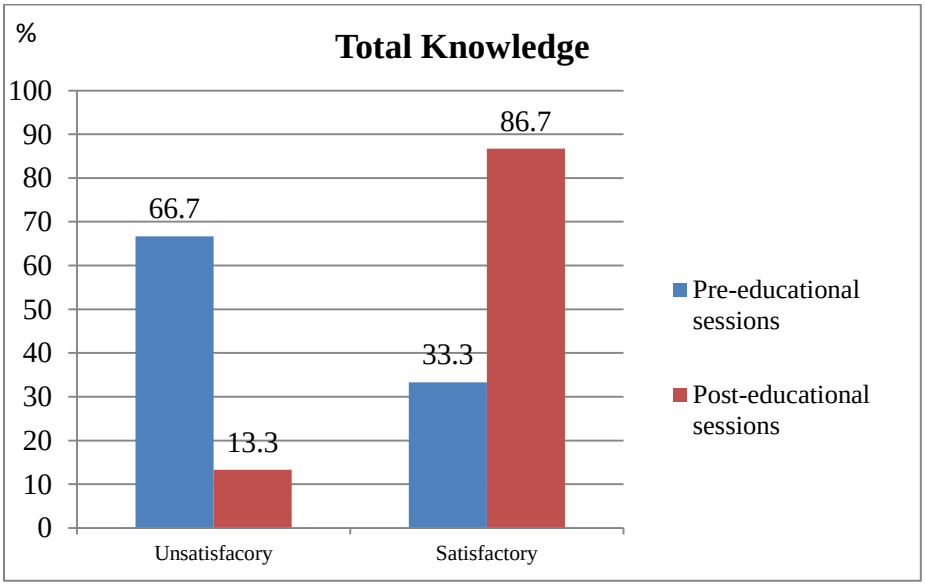

Figure (1): Distribution of the studied nurses according to their knowledge about the second stage of labor (pre/ post) implementation of nursing educational sessions (n=30).

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Table (3): Distribution of the studied nurses according to their competency practice about the second stage of labor regarding emotional support & safety / infection prevention & control (N=30).

	Pre- Educational Sessions (n=30)				Post- Educational Sessions (n=30)				Chi-square test	
	Not done		Done		Not done		Done			
	No.	%	No.	%	No.	%	No.	%	x2	p-value
Emotional support										
Explain to the woman and support person what will be done, and encourage questions.	18	60	12	40.0	0	0.0	30	100.0	25.714	<0.001**
Listen to what the woman and support person have to say.	30	100.0	0	0.0	14	46.7	16	53.3	24.632	<0.001**
Provide emotional support and reassurance, and keep the woman and family informed throughout birth and during the immediate care for newborn	22	73.4	8	26.7	6	20.0	24	80.0	17.538	<0.001**
Safety / Infection Prevention & Control										
Demonstrates appropriate disposal of biological waste.	20	66.7	10	33.3	6	20.0	24	80.0	13.365	<0.001**
Wear a clean plastic or rubber apron, rubber boots, and eye goggles.	28	93.4	2	6.7	8	26.7	22	73.3	29.167	<0.001**
Wash hands thoroughly with soap and water, and dry them with a clean, dry cloth (or air dry).	22	73.4	8	26.7	6	20.0	24	80.0	17.538	<0.001**
Use sterile or high-level disinfected (HLD) surgical gloves on both hands	14	46.6	16	53.3	10	33.3	20	66.7	5.444	0.048*

x^2: Chi-square test. P-value >0.05 Non significant; *p-value <0.05Significant; **p-value <0.001 Highly Significant

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Table (4): Distribution of the studied nurses according to their competency practice about the second stage of labor regarding care of the women through the second stage of labor and birth & documentation (N=30)

	Pre- Educational Sessions (n=30)				Post- Educational Sessions (n=30)				Chi-square test	
	Not done		Done		Not done		Done			
	No.	%	No.	%	No.	%	No.	%	x^2	p-value
Care of the Women Through the Second Stage of Labor and Birth										
Prepare essential equipment for the birth before onset of the second stage of labor.	10	33.3	20	66.7	4	13.3	26	86.7	8.482	0.002*
Assess uterine contraction & fetus status (hear rate & movement) between uterine contraction.	20	66.7	10	33.3	10	33.4	20	66.7	10.476	0.005*
Prepare uterotonic drug (oxytocin is the uterotonic of choice).	10	33.3	20	66.7	4	13.3	26	86.7	5.183	0.035*
Prepare epidural analgesia if needed.	18	60	12	40.0	6	20.0	24	80.0	13.000	0.002*
Ask the woman to empty her bladder when second stage is near (catheterize only if the woman cannot urinate and bladder is full).	20	66.7	10	33.3	10	33.4	20	66.7	10.476	0.005*
Assist the woman to assume the position of her choice (squatting, semi-sitting) and allow her to change position according to what's most comfortable for her.	30	100	0	0.0	6	20.0	24	80.0	42.000	<0.001**
Place a sterile drape from the delivery pack under the woman's buttocks, another over her abdomen, and use a third drape to receive the baby.	24	80.0	6	20.0	14	46.7	16	53.3	8.717	0.013*
Perform perineal care with antiseptic solution.	24	80.0	6	20.0	8	26.7	22	73.3	18.989	<0.001**
Instruct women about method of pushing during second stage of labor and to take a deep breath at the beginning of a contraction and then hold it and bear down throughout the contraction.	26	86.6	4	13.3	8	26.7	22	73.3	28.684	<0.001**
Perform perineal massage and place hand on guarding the perineum to prevent perineal tears or lacerations.	24	80	6	20.0	12	40.0	18	60.0	16.154	<0.001**
Record relevant details on the woman's record:										
Time the baby is born.	28	93.3	2	6.7	8	26.7	22	73.3	7.718	0.021*
Duration of second stage.	28	93.3	2	6.7	10	33.4	20	66.7	23.470	<0.001**
Episiotomy time (including name of the provider, route and dosage of epidural analgesia drug used).	28	93.3	2	6.7	20	66.6	10	33.3	11.022	0.004*

x^2: Chi-square test. P-value >0.05 Non significant; *p-value <0.05Significant; **p-value <0.001 Highly Significant.

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

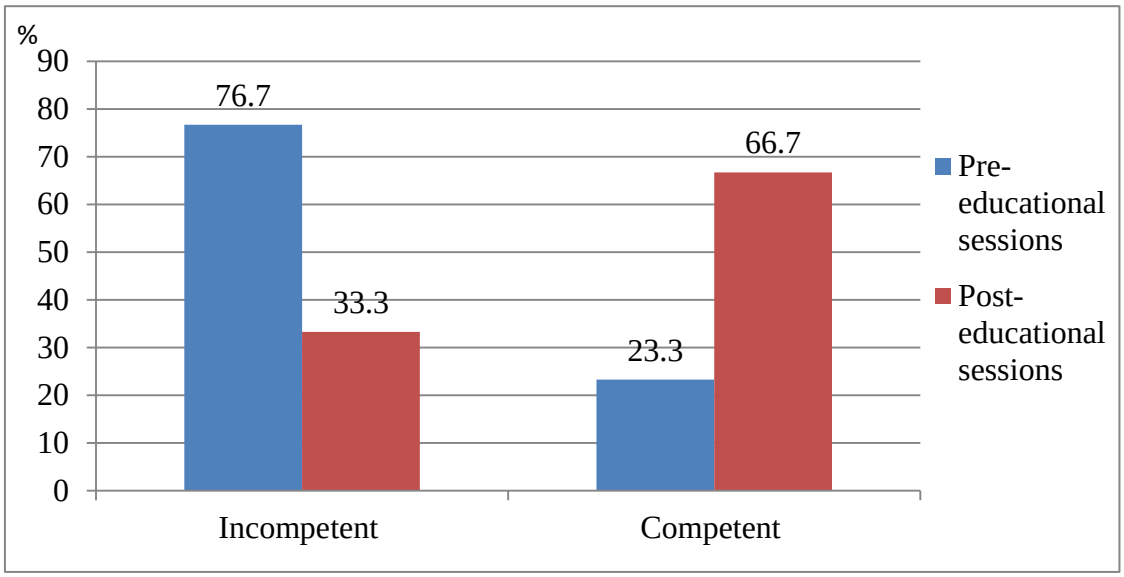

Fig. (2): Distribution of the studied nurses according to their competency practice about the second stage of labor (pre/ post) implementation of nursing educational sessions

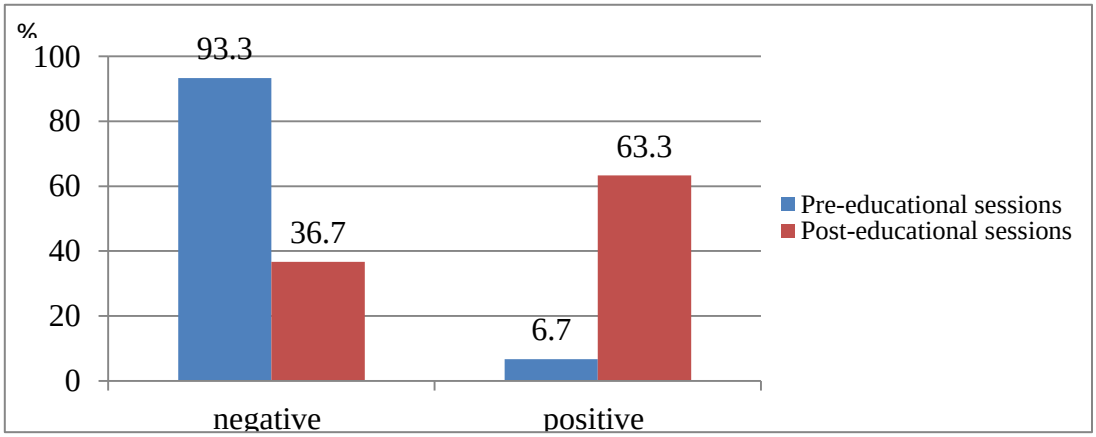

Fig. (3): Distribution of the studied nurses according to their attitude about competency education model (pre-post) implementation of nursing educational sessions

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Table (5): Distribution of the studied nurses according to their attitude about competency education model (pre-post) implementation of nursing educational sessions (n=30).

Items	Pre-educational sessions (n=30)						Post-educational sessions (n=30)						Chi-square test	
	disagree		Neutral		agree		disagree		Neutral		agree		x^2	p-value
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Simplicity of competency education model that used.	2	6.7	27	90.0	1	3.3	0	0.0	12	40.0	18	60.0	22.980	<0.001**
Effectiveness of competency education model in quality of care improvement.	4	13.3	26	86.7	0	0.0	0	0.0	8	26.7	22	73.3	27.158	<0.001**
Effectiveness of competency education model in increasing mother`s quality of care.	21	70.0	5	16.7	4	13.3	0	0.0	14	46.7	16	53.3	32.463	<0.001**
Effectiveness of competency education model in increasing quality of care cohesion.	22	73.3	8	26.7	0	0.0	0	0.0	10	33.3	20	66.7	42.222	<0.001**
Effectiveness of competency education model in saving nurses' time and effort.	18	60.0	12	40.0	0	0.0	0	0.0	8	26.7	22	73.3	40.800	<0.001**
Accuracy of competency education model compared to other models.	17	56.7	10	33,3	3	10.0	0	0.0	10	33.3	20	66.7	29.565	<0.001**
Completeness of competency education model's content compared to models.	4	13.3	21	70.0	5	16.7	0	0.0	8	26.7	22	73.3	20.531	<0.001**
Effectiveness of competency education model's content in increasing nurses' level of knowledge.	9	30.0	21	70.0	0	0.0	0	0.0	10	33.3	20	66.7	32.903	<0.001**
Effectiveness of competency education model's content in organizing nurses' interventions.	10	33.3	15	50.0	5	16.7	0	0.0	10	33.3	20	66.7	20.000	<0.001**
Effectiveness of competency education model's content in prioritizing mother / client care and problems.	16	53.3	14	46.7	0	0.0	0	0.0	10	33.3	20	66.7	36.667	<0.001**
Effectiveness of competency education model's content in preventing fault and mistake show by you.	18	60.0	9	30.0	3	10.0	2	6.7	8	26.7	20	66.7	25.424	<0.001**
Effectiveness of competency education model's content in proper and correct decision making	13	43.3	17	56.7	0	0.0	0	0.0	6	20.0	24	80.0	42.261	<0.001**

x^2: Chi-square test. P-value >0.05 Non significant; *p-value <0.05Significant; **p-value <0.001 Highly Significant

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

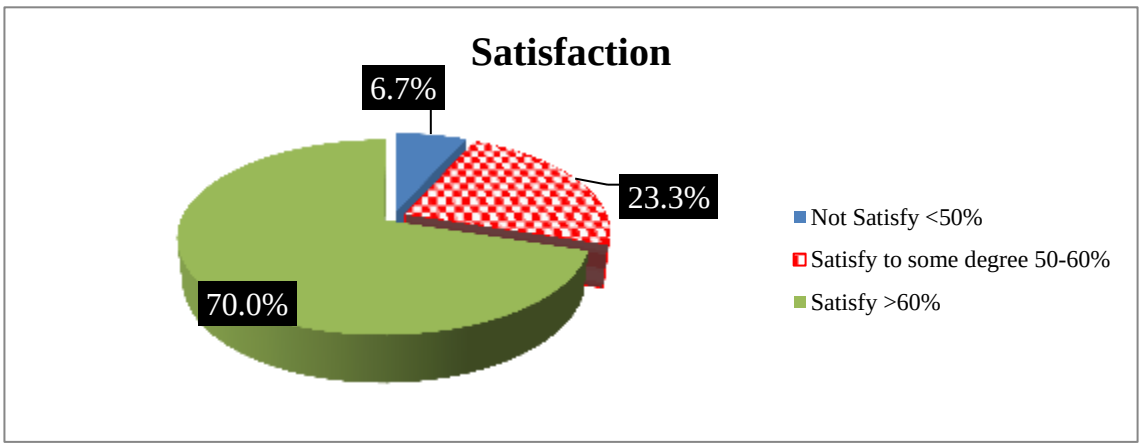

Figure (4): Distribution of the studied nurses according to their satisfaction toward educational session regarding active management of second stage of labor (post) implementation of educational sessions (n=30)

Table(6): Correlation matrix between total score of nurses' competency knowledge, nurses' competency practice, nurses' attitude toward competency education model and nurses' satisfaction toward educational session, (post) implementation of educational sessions.

		Total score of knowledge	Total score of practice	Total score of attitude	Total score of satisfaction
Total score of knowledge	r		0.413	0.569	0.549
	p-value		<0.001**	<0.001**	<0.001**
	N		30	30	30
Total score of practice	r	0.413		0.487	0.477
	p-value	<0.001**		0.009*	0.016*
	N	30		30	30
Total score of attitude	r	0.569	0.487		0.393
	p-value	<0.001**	0.009*		0.034*
	N	30	30		30
Total score of satisfaction	r	0.549	0.477	0.393	
	p-value	<0.001**	0.016*	0.034*	
	N	30	30	30	

Discussion

The aim of the current study to evaluate the effect of competency based education model on nurses' performance regarding active management of second stage of labor

Regarding to personal characteristics of nurses in second stage of labor involved in the present study showed that mean age of the studied nurses (25.93 ± 4.40) that more than half of the studied nurses were between 18:24 years.

This finding was in agreement with **Kadhim et al., (2021)** who studied "Nursing care of fetus and pregnant women during second and third stages of labor at Bint Al-Huda hospital: a descriptive, cross-sectional hospital-based study was conducted

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

with nurses from various units in the maternity department's labor room of the Bint Al-Huda hospital". In Iraq reported that the age group of (20-25 year) had the highest proportion of participants in study.

Concerning to knowledge regarding second stage of labor of studied nurses, the present study reveals that there was highly statistically significant improvement in nurses' knowledge regarding second stage of labor after implementing educational session regarding active management of second stage of labor. In the pre educational session phase, all of the nurses had incorrect answers regarding maternal position during second stage of labor, while majority of studied nurses had correct answer in the post educational session phase.

This result was in agreement with **Fouad (2023)** who studied "Educating nursing staff on evidence-based maternal positioning to promote fetal descent during the first and second stages of labor" At University of San Francisco, United States. A post-education survey revealed a significant improvement in the nurses' knowledge and confidence level in the application of the labor positions or maternal positioning that promote fetal descent.

As regards satisfactory regarding level of knowledge about second stage of labor, the present study reveals that in the pre educational sessions phase, more than two third of the studied nurses had unsatisfactory regarding level of knowledge about second stage of labor, in the post educational sessions phase, majority of the studied nurses had satisfactory regarding level of knowledge about second stage of labor.

This result was in agreement with **Mohamed et al., (2022)** who studied "Effect of competency based training program on nurses' performance regarding endotracheal tube suction for neonates on mechanical ventilator" At Benha University, Egypt. Egyptian Journal of Health Care: A quasi-experimental study was reported that more than two third of studied nurses had satisfactory knowledge level post implementation of the competency-based training program.

In relation to total nurses' practice regarding active management of second stage of labor, the current study reveals that there was highly statistically significant improvement in nurses' competency practice regarding emotional support during second stage of labor after implementing educational sessions regarding active management of second stage of labor. In the post educational sessions phase, majority of the nurses had correct answer (done) regarding provide emotional support and reassurance, and keep the woman and her family informed throughout birth and during the immediate care for newborn.

This finding was similar to **El-Ansary et al., (2023)** who studied "Effect of competency-based education on interns nursing students' performance regarding active management of third stage of labor in Egypt" A quasi-experimental study was conducted from student nurses in the delivery unit at Mansoura University hospital, Egypt that reported in the post intervention phase, the most of the nurses had correct answer (done) regarding provide emotional support and reassurance, and keep the woman and her family informed throughout birth and during the immediate care for newborn.

Concerning total nurses' practice regarding active management of second stage of labor, the present study reveals that there was highly statistically significant improvement in nurses' competency practice regarding safety / infection prevention & control during second stage of labor after implementing educational sessions regarding active management of second stage of labor. Majority of the nurses had correct answer (done) regarding wash hands thoroughly with soap and water, and dry them with a clean, dry cloth.

This result is supported with **Fahmi et al., (2021)** who studied "Practice regarding infection control measures during the second stage of labor". Faculty of Nursing, Zagazig University, Egypt. A Multicenter Study was conducted that hand washing among the studied nurses in the delivery room during second stage of labor was about two third of the studied nurses.

Concerning total nurses' practice regarding active management of second stage of labor, the present study reveals that there was highly statistically significant improvement in nurses' competency practice regarding care of the women through the second stage of labor and birth during second stage of labor after implementing educational sessions regarding active management of second stage of labor, more than two third of the studied nurses had correct answer (done) regarding instruct women about method of pushing during second stage of labor and to take a deep breath at the beginning of a contraction and then hold it and bear down throughout the contraction.

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

This result is supported with M**oustafa Elbana et al (2022)** who studied "Effect of spontaneous pushing technique during second stage of labor on labor outcomes among primiparas". At Benha University, Egypt. A quasi-experimental study was reported that majority of women that used effective of breathing technique during second stage of labor, the duration of the second stage of labor was short after nurses instruction.

In relation to total nurses' practice regarding active management of second stage of labor, the current study reveals that there was highly statistically significant improvement in nurses' competency practice regarding documentation during second stage of labor after implementing educational sessions regarding active management of second stage of labor. More than two third of the studied nurses had correct answer (done) regarding record duration of second stage.

This result is supported with **Mohamed et al (2022)** who studied "Effect of competency based training program on nurses' performance regarding endotracheal tube suction for neonates on mechanical ventilator". At Benha University, Egypt. A quasi-experimental study was reported that, there were statistically significant improvement nurses' documentation of care after competency based training program.

As regards to total nurses' practice regarding active management of second stage of labor, the present study reveals that there was highly statistically significant improvement in nurses' competency practice after implementing educational sessions regarding active management of second stage of labor. Two third of the studied nurses had competent regarding level of competency practice for second stage of labor.

The result of this study, on the same line **Nabawy Elaasar et al (2022)** who studied "Effect of competency based training program on nurses' performance regarding endotracheal tube suction for neonates on mechanical ventilator". At Benha University, Egypt. A quasi-experimental design was found that, the majority of the studied nurses had competent practice post implementation of the competency-based training program compared to less than one quarter of nurse's pre competency-based training program with statistically significant differences.

In relation to nurses' attitude toward competency based educational model, the present study shows that the attitude of the studied nurses of the competency based educational model about the second stage of labor. About two third of the studied nurses had positive attitudes regarding competency based educational model.

This finding was similar to **Salah Eldin et al., (2022**) who studied "Effect of competency based training program on nurses' performance regarding endotracheal tube suction for neonates on mechanical ventilator". At Benha University, Egypt. A quasi-experimental design was found that the attitude of the studied nurses in post competency-based training program, the most of the studied nurses had positive attitudes regarding competency based training program.

Regarding nurses' satisfaction toward competency based educational model, the present study shows that satisfaction of the studied nurses of the competency based educational sessions about the second stage of labor, about one third of the studied nurses had not satisfy regarding to educational sessions regarding active management of second stage of labor implementation of educational sessions, while more than two third of the studied nurses had satisfy regarding toward educational sessions regarding active management of second stage of labor.

This finding was not similar to **Shin & Kim (2021)** who studied "Operating room nurses want differentiated education for perioperative competencies—based on the clinical ladder". At Bundang Hospital, Korea. Descriptive cross-sectional study was reported that about two third of the studied nurses in operating room had low level of satisfaction, more than one third of the studied nurses had level of satisfaction.

As regards to Correlation between total score of nurses' competency practice, nurses' attitude toward competency education model, the present study found that there is a statistically significant positive correlation between the studied nurses' total competency practice and nurses' attitude post implementation of competency based educational model(p- value <0.009*).

This result is supported with **Dasila et al., (2022)** who studied effect of competency based education regarding infection control practices during intranatal period on knowledge and attitude of nursing personnel working in labour room" in India. An Experimental one group pretest posttest study was revealed that after nursing personnel had positive attitude towards infection control practices in labour room as p value <0.0001 level of significance.

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

From the researcher's point of view, this result supports the attitudes of studied nurses about competency based educational model are shaped by knowledge. Therefore, improvement of nurses' knowledge level regarding active management of second stage of labor, this is reflected by improvement of studied nurses' skills. The present study supports practices level of studied nurses about active management of second stage of labor are shaped by nurses' satisfaction toward competency based educational sessions regarding second stage of labor.

Conclusion

Based on the study finding, can be concluded that:-

The implementation of competency-based educational model improved the nurses' performance and competency level regarding second stage of labor compared to pre implementing of the educational sessions, which revealed that majority of the studied nurses had satisfactory regarding level of knowledge about second stage of labor, more than two third of the studied nurses had competent regarding level of competency practice of second stage of labor, about two third of the studied nurses had positive attitudes regarding competency based educational model, more than two third of the studied nurses had satisfy regarding toward educational sessions regarding active management of second stage of labor after implementation of educational sessions.

The results of current study supported hypotheses and achievement the aim of the present study.

Recommendations

In the light of results of this study, the following recommendations were suggested:

- Development educational sessions for nurses working with women at labor room that received competency based educational sessions to evaluate effective of educational sessions on nurses' knowledge regarding stages of labor.

Future Recommendations:

- Conducting the study in different settings in Egypt to generalize the results of the study and raise the level of competency of nursing care regarding stage of labor is recommended.
- Study the impact of competency based educational model for nurses on the quality of health for laboring women.
- Study the factors affecting nurses' competence in the care of laboring women.
- Implementing periodic educational program based on competency model for nurses working with women at labor room for all stages of labor.

References

1. **Abu Sera, H. (2022).** The Effect of instructional guidelines on women with cesarean section regarding post-operative care. Helwan Egypt. International Journal for Nursing Research and Practice, 1(1), 14-26.
2. **Ali, A. ., Parveen , R. ., Sarwar, H. ., & Aziz, Z. . (2023).** Effect of Skills Competency-Based Orientation on Clinical Performance among Nursing Interns at University of Lahore Teaching Hospital: Effect of Skills Competency on Clinical Performance. Pakistan Journal of Health Sciences, 4(03). https://doi.org/10.54393/pjhs.v4i03.592
3. **Baraia, Z.Fahmi, S. F., A., & Abdelati, I. H. (2021).** Nurses Practice Regarding Infection Control Measures during The Second Stage of Labor: Faculty of Nursing, Zagazig University, Egypt. A Multicenter Study. Evidence-Based Nursing Research, 3(1), 13-13
4. **Chang, H. Y., Binali, T., Liang, J. C., Chiou, G. L., Cheng, K. H., Lee, S. W. Y., & Tsai, C. C. (2022).** Ten years of augmented reality in education: A meta-analysis of (quasi-) experimental studies to investigate the impact. Computers & Education, 191, 104641.
5. **Dasila, P.,Kadam, M., & Gopalkrishnan, S (2022).** Effect of Competency Based Education Regarding Infection Control Practices during Intranatal Period on Knowledge and Attitude of Nursing Personnel Working In Labour Room". India. Experimental study, International Journal of Health Sciences and Research E-ISSN 2348-1269, P- ISSN 2349-513
6. **Dent, M., VanOtterloo, L., & Brady, M. (2023).** Improving Nurse Management of the Second Stage of Labor. Nursing for Women's Health in California, State University, and Fullerton. Nursing for Women's Health, 27(5), 344-353

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

7. **Deusa-López, P., Cuenca-Martínez, F., Sánchez-Martínez, V., & Sempere-Rubio, N. (2024).** Maternal outcomes using delayed pushing versus immediate pushing in the second stage of labour: An umbrella review. Valencia, Spain International Journal of Nursing Studies, 104693.
8. **El-Ansary., Ezzat Osman, N., E. S., & Hassan Mohamady, S. (2023).** Effect of Competency-Based Education on Interns Nursing Students' Performance Regarding Active Management of Third Stage of Labor. The delivery unit at Mansoura University Hospital, Egypt. International Egyptian Journal of Nursing Sciences and Research, 3(2), 342-362.
9. **Ezzat Osman, N., El-Ansary, E. S., & Hassan Mohamady, S. (2023).** Effect of Competency-Based Education on Interns Nursing Students' Performance Regarding Active Management of Third Stage of Labor. The delivery unit at Mansoura University Hospital, Egypt. International Egyptian Journal of Nursing Sciences and Research, 3(2), 342-362.
10. **Fahmi, S. F., Baraia, Z. A., & Abdelati, I. H. (2021).** Nurses Practice Regarding Infection Control Measures during The Second Stage of Labor: Faculty of Nursing, Zagazig University, Egypt. A Multicenter Study. Evidence-Based Nursing Research, 3(1), 13-13.
11. **Fouad, M. R. (2023).** Educating Nursing Staff on Evidence-Based Maternal Positioning to Promote Fetal Descent During the First and Second Stages of Labor. University of San Francisco, United States.
12. **Gaheen, M. A., & Abo-Hatab, T. A. E. S (2021).** Effect of Utilizing Perineal Massage, Warm Compresses and Hands on Techniques during the Second Stage of Labor on Perineal Outcomes Tanta Scientific Nursing Journal, Egypt.
13. **Hongxia Wang, li, Wang, , jia, lu, qing, wenjie- Li, fan- Zhou, Jie- (2020).**The Impact of Stage of Labor on Adverse Maternal and Neonatal Outcomes in Multiparous Women: A Retrospective Cohort Study DO - 10.21203/rs.3.rs-22314/v2 PY - /04/10
14. **Hyredin, T., Urgie, T., & Sium, A. F. (2023).** Prolonged second stage of labor: Predictors of adverse maternal and perinatal outcomes in a sub-Saharan setting. International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics, Addis Ababa, Ethiopia.163 (3), 997-1004.
15. **Kadam, M., Dasila, P., & Gopalkrishnan, S (2022).** Effect of Competency Based Education Regarding Infection Control Practices during Intranatal Period on Knowledge and Attitude of Nursing Personnel Working In Labour Room" India. Experimental study, International Journal of Health Sciences and Research E-ISSN 2348-1269, P- ISSN 2349-513
16. **Kadam, M., Dasila, P., & Gopalkrishnan, S. (2021).** Effect of Competency Based Education on Infection Control Practices of Labour Room Nurses in Raigad District, Maharashtra. India. Evaluative research. International Journal of Health Sciences and Research ISSN: 2249-9571
17. **Kadhim, S. T., Washee, O. F., & Hassan, A. O. S (2021).** Nursing Care of Fetus and Pregnant Women during Second and Third Stages of Labor at Bint Al-Huda Hospital in Iraq. Jundishapur Journal of Microbiology
18. **Modoor, S., Fouly, H., & Rawas, H. (2021).** The effect of warm compresses on perineal tear and pain intensity during the second stage of labor: A randomized controlled trial. in King Khaled Hospital, affiliated with the Ministry of National Guard Hospital Affairs, King Abdulaziz Medical City –Western Region, Saudi Arabia Belitung Nursing Journal, 7(3), 210-218.
19. **Mohamed, A. E. G., Nabawy Elaasar, H., & Salah Eldin Mohamed Diab, S. (2022).** Effect of Competency Based Training Program on Nurses' Performance Regarding Endotracheal Tube Suction for Neonates on Mechanical Ventilator at Benha University, Egypt. A quasi-experimental design Egyptian Journal of Health Care, 13(4), 1788-1801.
20. **Molla, W., Demissie, A., & Tessema, M. (2021).** Active management of third stage of labor: practice and associated factors among obstetric care providers in North Wollo, Amhara Region, Ethiopia. Obstetrics and Gynecology International, 2021.
21. **Mostafa Elbana, H., Abd-Elsalm Mohamed, M., Abdelsalam Ramadan, S., & Mohamed Mahmoud, M. (2022).** Effect of Spontaneous Pushing Technique during Second Stage of Labor on Labor Outcomes among Primiparas. : A quasi-experimental Journal of Nursing Science Benha University, Egypt 3(2), 664-679 ho.int/publications/i/item/9789240068759
22. **Murray, M., & Gayle Huelsmann, B. S. N. (2020).** Labor and delivery nursing: a guide to evidence-based practice. E_Book New York, United States. Springer publishing company.
23. **Nabawy Elaasar,Mohamed, A. E. G., H., & Salah Eldin Mohamed Diab, S. (2022).** Effect of Competency Based Training Program on Nurses' Performance Regarding Endotracheal Tube Suction for Neonates on Mechanical Ventilator at Benha University, Egypt. A quasi-experimental design Egyptian Journal of Health Care, 13(4), 1788-1801.
24. **Nilsson, C.,Häggsgård, C., Teleman, P., Rubertsson, C., & Edqvist, M. (2022).** Women's experiences of the second stage of labour. Women and Birth, 35(5), e464-e470. Lund, Sweden
25. **Niemczyk, N. A., Ren, D., & Stapleton, S. R. (2022).** Associations between prolonged second stage of labor and maternal and neonatal outcomes in freestanding birth centers: a retrospective analysis. Biomedical center Pregnancy and Childbirth, grant from the American Association of Birth Centers Foundation and by the University of Pittsburgh, School of Nursing. 22(1), 1-10.
26. **Parveen , R. ., Ali, A. ., Sarwar, H. ., & Aziz, Z. . (2023).** Effect of Skills Competency-Based Orientation on Clinical Performance among Nursing Interns at University of Lahore Teaching Hospital: Effect of Skills Competency on Clinical Performance. Pakistan Journal of Health Sciences, 4(03). https://doi.org/10.54393/pjhs.v4i03.592
27. **Ren, D., Niemczyk, N. A., & Stapleton, S. R. (2022).** Associations between prolonged second stage of labor and maternal and neonatal outcomes in freestanding birth centers: a retrospective analysis. Biomedical center Pregnancy and

ISSN 2786-0183

Helwan International Journal for Nursing Research and Practice

Vol. 3, Issue 6, Month: June 2024, Available at:https://hijnrp.journals.ekb.eg/

Childbirth, grant from the American Association of Birth Centers Foundation and by the University of Pittsburgh, School of Nursing. 22(1), 1-10.

28. **Salah Eldin., Mohamed Diab, S. & Nabawy Elaasar,Mohamed, A. E. G., H., (2022).** Effect of Competency Based Training Program on Nurses' Performance Regarding Endotracheal Tube Suction for Neonates on Mechanical Ventilator at Benha University, Egypt. A quasi-experimental design Egyptian Journal of Health Care, 13(4), 1788-1801
29. **Shin, Y. Y., & Kim, S. S. (2021).** Operating room nurses want differentiated education for perioperative competencies—based on the clinical ladder. Descriptive cross-sectional study International journal of environmental research and public health, Seoul National University Bundang Hospital, Seongnam-si 13620, Korea; 18(19), 1029
30. **Stapleton, S. R., Ren, D., & Niemczyk, N. A. (2022).** Associations between prolonged second stage of labor and maternal and neonatal outcomes in freestanding birth centers: a retrospective analysis. Biomedical center Pregnancy and Childbirth, grant from the American Association of Birth Centers Foundation and by the University of Pittsburgh, School of Nursing. 22(1), 1-10.
31. **Teleman, P.,Häggsgård, C., Nilsson, C., Rubertsson, C., & Edqvist, M. (2022)**. Women's experiences of the second stage of labour. *Women and Birt*h, 35(5), e464-e470. Lund University, Sweden
32. **Urgie, T., Hyredin, T., & Sium, A. F. (2023).** Prolonged second stage of labor: Predictors of adverse maternal and perinatal outcomes in a sub-Saharan setting. International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics, Addis Ababa, Ethiopia.163 (3), 997-1004.
33. **Wang, li, Wang, hongxia, jia, lu, qing, wenjie- Li, fan- Zhou, Jie- (2020).**The Impact of Stage of Labor on Adverse Maternal and Neonatal Outcomes in Multiparous Women: A Retrospective Cohort Study DO - 10.21203/rs.3.rs-22314/v2 PY - /04/10