Effect of Supportive Measures Guidelines on Nurses' Practices during Labor

Sh. Shokry[1], K. Abou Shabana[2], O. Farouk[2], R. Mohamed[2]

[1]Nursing Technical Institute, Cairo, Egypt
[2]Faculty of Nursing, Ain Shams University, Cairo, Egypt
Email: sheree_shgh@yahoo.com

Abstract

Objectives: To investigate the effect of supportive measures guidelines on nurses' practices during labor. **Methods:** A quasi-experimental design (an interventional pre and post-test study). **Setting:** The study was conducted at obstetric wards and intrapartum units at Nasser Institute Hospital. **Sample:** All nurses provide guided direct care, there were 40 nurses included in the study. **Tools:** Three tools were used to collect data named self-administered questionnaire sheet, labor supportive measures' observational checklists, and nurses' satisfaction sheet. **Results:** There was a highly significant improvement in total knowledge and total practical skills among the studied sample pre-intervention compared to immediate post and follow-up intervention ($p \leq 0.01$). Additionally, 95% of the studied sample was satisfied with the advanced knowledge included in the guidelines. **Conclusion:** The supportive measures guidelines had an efficient improving nurses' knowledge and practices post-intervention. Also, the majority of the studied sample was satisfied with the implemented guidelines. **Recommendations**: Implementation of labor supportive measure guidelines in different childbirth units to improve nurses' practice. Further research is required to investigate parturient woman's satisfaction with the childbirth process after implementing labor supportive measures and the effect of labor supportive measures on childbirth process outcome.

Keywords

Labor, Supportive Measures, Guidelines, Nurses' Practices and Satisfaction

1. Introduction

The new Sustainable Development Goals to 2030 aim to reduce maternal mor-

tality and provide equitable access to maternal healthcare. Compromised access to maternal health facilities in low-income countries, and specifically in Africa, contribute to the increased prevalence of maternal mortality. Goal 3 of the new Sustainable Development Goals to 2030 aims to reduce global maternal mortality ratio to less than 70 per 100,000 live births [1]. Maternal mortality could be attributed to poor socio-economic conditions, low quality of care (QoC), lack of well-trained healthcare professionals, lack of proper infrastructure, and barriers to accessing medical facilities [2].

According to the World Health Organization [3] globally, the proportion of births attended by a skilled birth attendant in less developed countries increased from about 50% in 1990 to 60% in 2006. To be specific, regions with the lowest proportions of skilled-birth-attended deliveries were eastern Africa (34%), western Africa (41%) and south-central Asia (47%). The majority of approximately 140 million births that occur globally every year are among women without risk factors for complications for themselves or their babies at the beginning and throughout labor. Also, approximately half of all stillbirths and a quarter of neonatal deaths result from complications during labor and childbirth. The burden of maternal and perinatal deaths is disproportionately higher in low- and middle-income countries compared to high-income countries [4].

Therefore, improving the quality of care around the time of birth, especially in low- and middle-income countries has been identified as the most impactful strategy for reducing stillbirths, maternal and newborn deaths, compared with antenatal or postpartum care strategies [5]. While numerous studies and systematic reviews suggest the use of nonpharmacologic approaches to pain management either as a primary method, or as a complement to pharmacologic approaches. Complementary and alternative therapies for pain relief involve non-pharmacologic measures that may be used either as a woman's total pain management program or to complement pharmacologic interventions [6].

Yet the road map of labor provides a useful framework for educator nurse to explain the psychological and physiological processes of labor, and a variety of activities for comfort and labor progress for women and their partners to use. By focusing on the normal unaltered process, parents learn to separate the norm from the numerous interventions that alter the process, sometimes for the better, sometimes for the worse [7]. Nurses play a multidisciplinary role as a direct care provider, health educator and counselor, as a researcher and as administrator.

2. Significance of the Study

Provision of support in labour is one of the evidence-based nursing practice standards known to reduce morbidity and mortality with better labour outcome [8]. Moreover, Emotional, physical, and informational support is positively affected mother's mental and physical health around the time of childbirth [9].

Furthermore, there are many beneficial effects of supportive measures pro-

vided by the nurses during labour as the cesarean section rates decreased, the length of labour shortened, the need for analgesics reduced, fear alleviated, pain in labour and incidence of postpartum depression perceived. Also it creates a positive attitude towards childbirth and turns the moments of pain into the most memorable moments of a woman's life which consequently lead to happier and comfortable labour experience and enhancing parturient woman's satisfaction [10].

According to the study of [11] who recommended design and implement the training program for nurses about supportive measures during labour to improve nurses' practices. So, the present study is based upon previously mention studies finding which aimed to enhance the nurses' practices of supportive measures during labour.

2.1. Aim of the Study

To investigate the effect of supportive measures guidelines on nurses' practices during labor.

2.2. Research Hypothesis

Application of the supportive measures guidelines was expected to enhance nurses' practices during labor.

2.3. Subject and Methods

2.3.1. Setting

The study was conducted at obstetric departments at Nasser Institute Hospital.

1) Study Design:

A quasi-experimental (an intervention pre and posttest study).

2) Sampling:

All nurses (40 nurses) who were working at previously mentioned study setting.

3) Exclusion Criteria:

Nursing director, assistant and supervisors will be excluded.

4) Tools of Data Collection:

Three tools were used after reviewing the advanced related literature. All tools of data collection implemented pre intervention then immediate and eight weeks post intervention but satisfaction tool was implemented eight weeks post intervention only.

The first tool: a self-administered questionnaire sheet which included two parts and it was designed by researcher: **the first part** assessed nurse's general characteristics (age, level of education, qualification, years of experience, attendance of guidelines, and place of residence). While **the second part** assessed nurses' knowledge related to supportive measures provided to laboring women, which involved 9 questions that included the following: (definition of supportive measures, types of supportive measures, effect of supportive measures on laboring women's physical, emotional and mental wellbeing, and effect of supportive

measures on labor progress and outcome). **Nurses' knowledge scoring system** was assessed as the following each question was evaluated as **two scores** for correct answer and **one score** for incorrect answer. While the total knowledge correct equal (≥60%) and the total knowledge incorrect equal (<60%).

The second tool: an observational checklist was adapted from [11], it was utilized to assess nurses' practices and skills to concerning Supportive Measures during Labor. It's included in three parts. **The first part** which included 15 items concerned with physical care which comprised of the following (9 items related to 1st stage of labor and 6 items related to 2nd, 3rd and 4th stage of labor). **The second part** which included 13 items about training and information provided to laboring women it involved (8 items related to 1st stage of labor and 5 items related to 2nd, 3rd and 4th stage of labor). **The third part** which included 11 items about emotional supports which comprised of (7 items related to 1st stage of labor and 4 items related to 2nd, 3rd and 4th stage of labor). **Scoring system:** This tool was included thirty-nine items; each item in the observational checklist was evaluated as **two score** for correct practice and **one score** for incorrect practice. The total correct practice was scored as ≥60% while incorrect practice total scored as <60%.

The third tool: nurse's satisfaction sheet was adapted from [12], which included two parts as the following: **The first part** nurse's satisfaction tools related to their satisfaction regarding implemented guidelines about supportive measures during labor, which included nine statements to assess nurses' satisfaction regarding supportive measures guidelines during labor. Each nurse was responded upon each item as satisfied, uncertainly satisfied and unsatisfied. **The second part** assessed the barriers that prevent nurses to comply with supportive measures during labor. Each nurse was responded (yes or no) upon each statement. This was utilized follow-up four weeks post intervention.

All tools were utilized pre intervention, immediately post intervention then follow-up four weeks post intervention but satisfaction tool was used follow-up four weeks post intervention.

An educational guideline was utilized according to nurses' learning needs.

2.4. Content Validity and Reliability

All tools of data collections were developed and sent to three specialized university Prof. according to their comments, modification were considered. On the other hand, there was reliability of all questions and high value of Alpha Cronbach.

2.5. Ethical Consideration

- An official approval was obtained from Maternal and Gynecological Nursing Department then Scientific Research Ethical Committee in Faculty of Nursing, Ain Shams University before starting the study.
- An official approval letter was sent to the director of Nasser Institute to con-

duct the study.

- Approval consent was obtained from the research scientific committee in Nasser institute.
- Oral consent was obtained from each participant in the study.
- The researcher was clarified objective and aim of the study to each participant included in the study.
- All tools of data collection didn't touch nurse's dignity, culture, traditional and religious & ethical issues and respect human rights. Also didn't include any immoral statement.
- Each nurse had right to withdraw from the study at any phase.
- All tools of data collection were kept after statistical analysis to promote confidentiality of the study.

2.6. Field Work or Operational Design

The study was implemented through three phases included the preparatory, implemented and evaluation phase.

2.6.1. Phase One (Preparatory Phase)

The current advanced national and international literature related to the study topic were reviewed, then prepared tools for data collection and designed guidelines. Finally, conducted a pilot study on 10% of the sample size (4 nurses) to evaluate the content validity, clarity and applicability of the tools used, according to statistical analysis of a pilot study, no modification was considered.

2.6.2. Phase Two (Implementation Phase)

Firstly, three nurses /day were interviewed according to sequence of their attendance in hospital registration book and explained the aim of the study to obtain their oral consent before four weeks from learning guidelines. Interview was conducted in a separate place to maintain confidentiality of the study (duration of each interview 20 min). Three nurses were given the sheets then back after 2 hours to be received the sheets.

Second, nurses' practices were assessed using an observational checklist, while they are providing care for laboring women.

- Each day, four nurses' practices were assessed from 9 Am to 9 pm.
- After the completion interviewing all nurses. The supportive measures guidelines were designed and implemented through (10) sessions 3 for theoretical part and 7 for practical training, duration of each session 20 minutes, number of participants (4) nurses.
- Methods of teaching were (group discussion, lectures, brain storming, demonstration and bed side teaching).
- Media used lab-top, figures, videos, role play as well as audiovisual aids (data show presentation) and module of laboring women were used for practical sessions through demonstration and application on group of mothers (Figures 1-4).

2.6.3. Phase Three (Evaluation Phase)

All tools of data collection were used pre intervention then immediately and four weeks post-intervention but the nurses' satisfaction tool was used only four weeks post intervention. Nurses' practice was assessed on four nurses then the mean was obtained for statistical analysis.
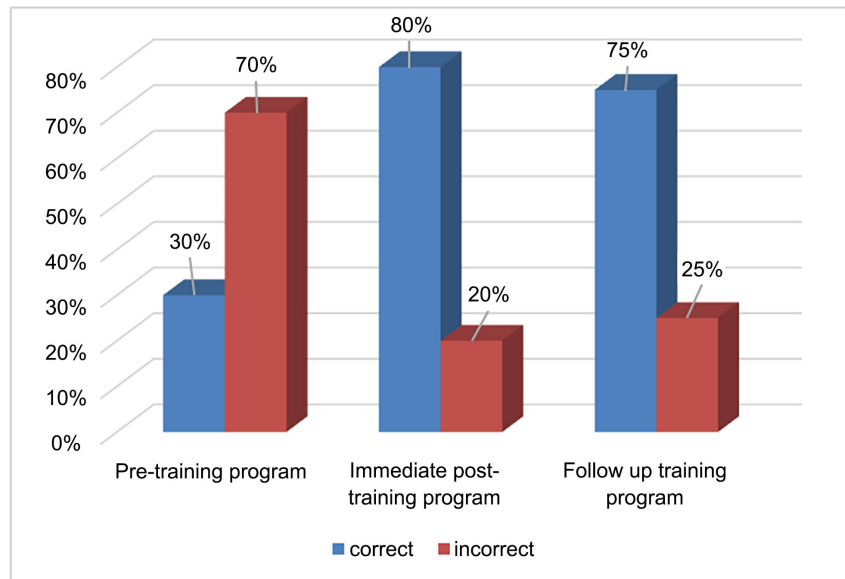
Figure 1. Frequency distribution among the studied sample according to their total knowledge regarding to labor supportive measures at pre, immediate post and follow up the guidelines (n = 40).
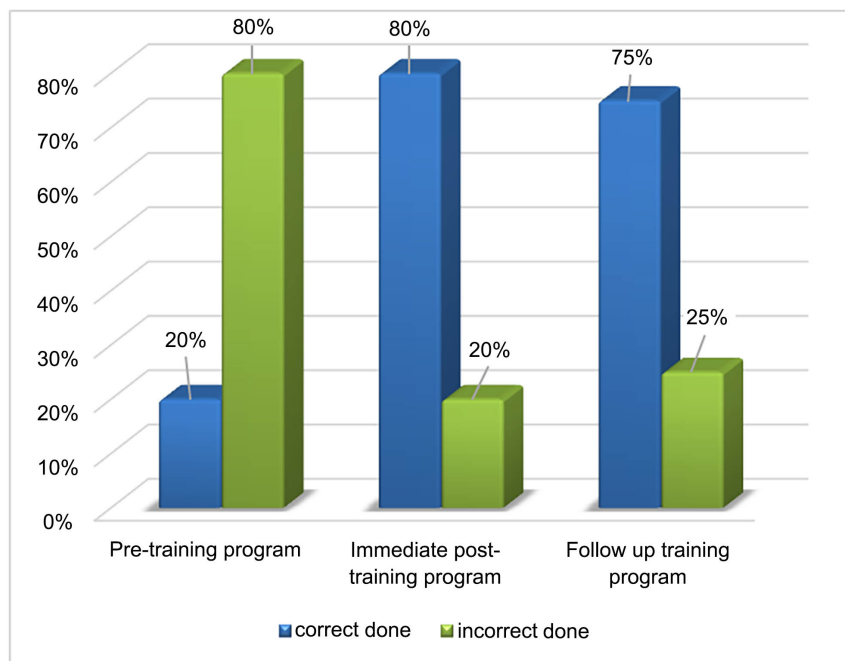
Figure 2. Frequency distribution among the studied sample according to their total practices of labor physical supportive measures pre, immediate post and follow up the guidelines (n = 40).
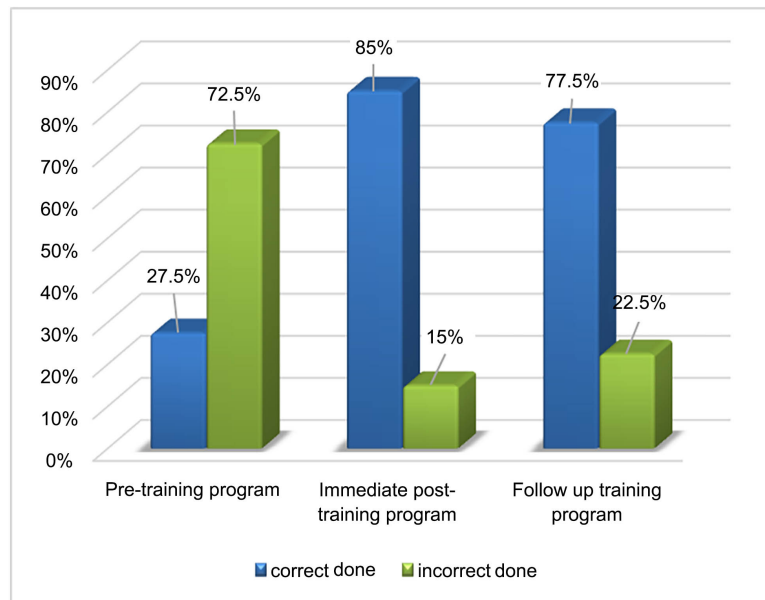
Figure 3. Frequency distribution among the studied sample according to their total practices of labor informational provided supportive measures pre, immediate post and follow up the guidelines (n = 40).

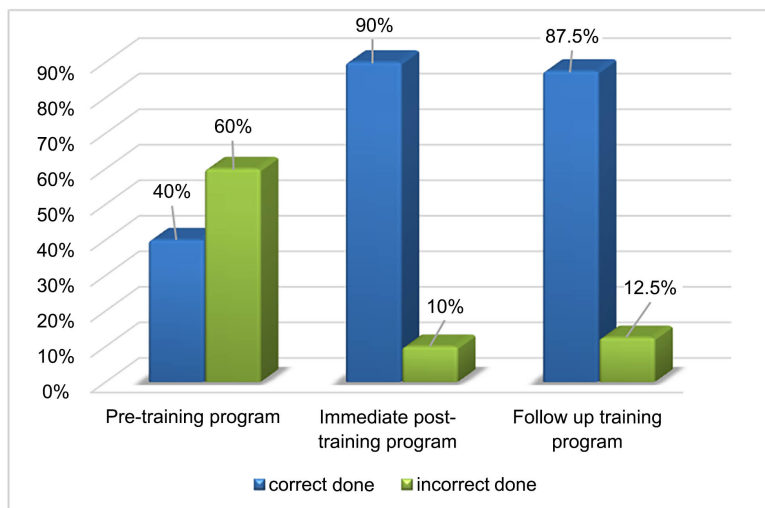**Figure 4.** Frequency distribution among the studied sample according to their total practices of labor emotional supportive measures pre, immediate post and follow up the guidelines (n = 40).

3. Results

Table 1 showed that, (27.5%) of the studied sample their age was less than 25 years with mean 32.9 ± 7.9 years. Concerned to residence, (95%) of the studied sample residing in urban areas. Regarding to educational level, (55%) of the studied sample had diploma education. Also, (47.5%) of the studied sample their years of experience were more than 15 years with mean of 11.9 ± 6.49 years. Moreover, the studied sample not attended previously guidelines related to supportive measures during labor.

Table 1. Frequency distribution among the studied sample according to their general characteristics (n = 40).

Items	N	%
Age (Year)		
21 - 25 years	11	27.5
26 - 30 years	6	15
31 - 35 years	8	20
36 - 40 years	7	17.5
41 - 45 years	8	20
$\bar{x}$ S.D	32.9 ± 7.9	
Residence		
Rural	2	5
Urban	38	95
Educational level		
Diploma	22	55
Technical Institute degree	16	40
Bachelor degree	2	5
Years of experience		
<5 years	11	27.5
5 - 10 years	4	10
11 - 15 years	6	15
>15 years	19	47.5
$\bar{x}$ S.D	11.9 ± 6.49	
Attending training program related to supportive measures during labor		
Yes	0	0
No	40	100
Total	**40**	**100**

Table 2 showed that, there was a marked improvement in knowledge of the studied sample about labor supportive measures post implementation of an guidelines with highly statistically significant difference at ($p \leq 0.01$) between pre, immediate post and follow up implementation of an guidelines.

Table 3 displayed a highly statistically significant improvement of studied sample's total practices of labor supportive measures after implementation of guidelines.

Table 4 showed that, (100%) of studied sample the guidelines enhances nurses' practices and the objective of the guidelines was simple and clear. Also, (97.5%) of studied sample satisfied about the educational sessions cover the objective, number of participant was suitable to the place of training and material of the guidelines was effective and scientific.

Table 2. Frequency distribution among the studied sample according to their knowledge regarding labor supportive measures at pre, immediate post and follow up the guidelines (n = 40).

Items	Pre guidelines		Immediate post guidelines		Follow up guidelines		Friedman test	
	N	%	N	%	N	%	χ^2	p-value
Definition of labor supportive measures.								
Correct	1	2.5	38	95	35	87.5	56.31	0.000**
Incorrect	39	97.5	2	5	5	12.5		
who is the supportive persons attended during labor								
Correct	1	2.5	35	87.5	32	80	57.81	0.000**
Incorrect	39	97.5	5	12.5	8	20		
Types of labor supportive measures								
Correct	2	5	36	90	32	80	41.01	0.000**
Incorrect	38	95	4	10	8	20		
Physical supportive measures								
Correct	3	7.5	32	80	30	75	46.46	0.000**
Incorrect	37	92.5	8	20	10	25		
Emotional supportive measures								
Correct	17	42.5	38	95	36	90	45.98	0.000**
Incorrect	23	57.5	2	5	4	10		
Informational supportive measures								
Correct	23	57.5	40	100	35	87.5	24.76	0.000**
Incorrect	17	42.5	0	0	5	12.5		
Importance of labor supportive measures								
Correct	1	2.5	35	87.5	32	80	68.29	0.000**
Incorrect	39	97.5	5	12.5	8	20		

Table 3. Frequency distribution among the studied sample according to their total practices regarding labor supportive measures at pre, immediate post and follow up the guidelines.

Total studied sample's practices	Pre guidelines		Immediate post guidelines		Follow up guidelines		Friedman test	
	N	%	N	%	N	%	χ^2	p-value
Correct done	8	20	35	87.5	32	80	28.71	0.000**
Incorrect done	32	80	5	12.5	8	20		

Table 4. Frequency distribution among the studied sample according to their satisfaction regarding labor supportive measures at follow up the guidelines (n = 40).

Items	Satisfied		Uncertainly Satisfied		Unsatisfied	
	N	%	N	%	N	%
Guidelines updated knowledge about supportive measures during labor	38	95	2	5	0	0
Guidelines enhances nurses' practices	40	100	0	0	0	0
Guidelines objective was clear and simple	40	100	0	0	0	0
Material of the guidelines was effective and scientific	39	97.5	1	2.5	0	0
Sitting of implementing training sessions was comfortable and organized	35	87.5	5	12.5	0	0
Number of participant was suitable to the place of training	39	97.5	1	2.5	0	0
The educational sessions cover the objective and content of the guidelines	39	97.5	1	2.5	0	0
The educational session time didn't interfere with nurses working schedule	36	90	4	10	0	0

Table 5 showed that, (90%) of the barriers that prevent nurses to comply with the implemented guidelines were shortage of nursing staff. Also, (87.5%) of the barriers were too much emergencies case and mothers' misconceptions regarding nursing care provided during labor.

Table 6 illustrated that, there was a highly statistically significant relation between studied sample's total practice about labor supportive measures at pre and post guidelines and their level of education & at post guidelines and their age and years of experience. Also, there was statistically significant relation at pre guidelines and their age and years of experience. While, there was no statistically significant relation at pre and post guidelines and their residence.

Table 7 showed that, there was a positive correlation between total studied sample's knowledge related to labor supportive measures and their total practice at pre, immediate post and follow up the program, where p-value = (<0.01).

Table 8 showed that, there was a positive correlation between total knowledge and practice of the studied sample about labor supportive measures and their satisfaction at follow up guidelines, where p-value = (<0.01).

4. Discussion

The present study aimed to investigate the effect of supportive measures guidelines on nurses' practices during labor. This aim was significantly approved within the framework of the present study's research hypothesis which was

nurses who received guidelines sessions related to supportive measures during labor has enhanced their knowledge and practices.

Table 5. Frequency distribution among the studied sample according to the barriers that prevent nurses to comply with the implemented labor supportive measures at follow up the guidelines (n = 40).

Items	Yes		No	
	N	%	N	%
Increasing laboring cases flow rate.	32	80	8	20
Shortage of nursing staff.	36	90	4	10
Too much emergencies case which lead to a lack of good communication with patients.	35	87.5	5	12.5
The presence of many visitors.	32	80	8	20
Engaged nurses with administrative duties.	20	50	20	50
Mothers' misconceptions regarding nursing care provided.	35	87.5	5	12.5

Table 6. Relation between the studied sample's general characteristics and their total correct practice related to labor supportive measures at pre and post guidelines.

Items		Total practice at pre guidelines				Total practice at post guidelines			
		Correct (n = 8)		χ^2	p-value	Correct (n = 35)		χ^2	p-value
		N	%			N	%		
Age (year)	<26	6	75			11	31.4		
	26 - 30	2	25			6	17.1		
	31 - 35	0	0.0	9.10	0.015*	8	22.9	14.89	0.001**
	36 - 40	0	0.0			5	14.3		
	41 - 45	0	0.0			5	14.3		
Residence	Rural	0	0.0	0.96	0.523	0	0.0	0.974	0.55
	Urban	8	100			35	100		
Level of Education	Diploma	0	0.0			17	48.6		
	Technical Institute degree	6	75	14.3	0.001**	16	45.7	17.02	0.000**
	Bachelor degree	2	25			2	5.7		
Years of Experience	<5	6	75			11	31.4		
	5 - 10	2	25	10.6	0.011*	4	11.4	17.22	0.000**
	11 - 15	0	0.0			6	17.2		
	>15	0	0.0			14	40		

Table 7. Correlation between the studied sample's total knowledge related to labor supportive measures and their total practice at pre, immediate post and follow up the guidelines.

Items		Total practice at Pre guidelines	Total practice at post-guidelines	Total practice at Follow up guidelines
Total knowledge at Pre guidelines	r	0.376		
	p	0.001**		
Total knowledge at Immediate post guidelines	r		0.427	
	p		0.000**	
Total knowledge at follow up guidelines	r			0.408
	p			0.000**

Table 8. Correlation between studied sample's total knowledge and practice related to labor supportive measures and their total satisfaction at follow up guidelines.

Items	Total satisfaction at follow up guidelines	
	r	P-value
Total knowledge at follow up guidelines	0.432	0.000**
Total practice at follow up guidelines	0.445	0.000**

The present study finding revealed that the age of nurses ranged from 21 years to 45 years with an average of 32.9 ± 7.9 years. Regarding educational level, more than a half of the studied sample had diploma education followed by a Technical Institute degree in nursing and lower percent had bachelor degree (55%, 40% and 5% respectively). The result of the current study was in harmony with [13] conducted a correlational study aimed to describe and determine the factors related to professional labor support behaviors among intrapartum nurses in the Northeast of Vietnam who showed that the age of intrapartum nurses ranged from 21 years to 58 years with an average of 37.07 ± 10.38 years. More than a half of them had a certificate from secondary nursing school (57.14%). There were (26.2%) of the participants holding a diploma degree in nursing, and (16.66%) of the subjects attained bachelor degree.

Furthermore, the present study research findings revealed that, there was a highly significant improvement of nurse's knowledge post intervention compared to pre intervention. The present study findings were consistent with [14] conducted a quasi-experimental study aimed to discuss continuous labor support benefits and implementation of an educational program designed to enhance nursing practice with regard to continuous labor support founded that there was significant improvement of nurses' knowledge post guidelines compared to pre guidelines because staff nurses didn't have knowledge pre guidelines compare to post guidelines related to implemented guidelines about supportive measures during labor.

Also the present study was supported by [15] conducted a survey-guided

education aimed to improve nursing self-efficacy for labor support techniques and implementation of the coping with labor algorithm in the United States who illustrated that the majority of nurses had high level of knowledge post guidelines compared to pre guidelines related to implemented program about labor support techniques guidelines. Furthermore, the present study was agreed with [16] conducted a pretest/posttest descriptive study aimed to design, implement, and evaluate a nursing theory and evidence-based educational program on professional labor support in the Midwest United States who reported that there was a highly significant improvement among nurses regarding total knowledge score post guidelines compared to pre guidelines.

Moreover, the present study finding revealed that the higher percent score was emotional supportive measure followed by providing information supportive measure and lower percent score was physical supportive measure during labor.

The present study finding was in harmony with [17] who carried out a systematic observational study aimed to test the validity and usability of the "Supportive Midwifery in Labor Instrument" and to test the feasibility and acceptability in the clinical intrapartum setting in Scotland, UK and showed that emotional support behavior was the most important category of support among parturient women. The agreement may be due to this study and the present study was the same objective and the same study sample type.

While the current study, findings were in disagreement with [11] who conducted a comparative descriptive study aimed to investigate parturient women's self-reported measures compared with nurses' compliance with supportive measures during labor in the Mansoura University Hospitals, Egypt and mentioned that the higher percent score was physical followed by providing information supportive measures and lower percent score was emotional supportive measures during labor (38.8%, 28.9%, and 25.2% respectively). The difference between study findings and this study may be related to the different type of research methodology. This research was comparative study, but the present study is an applied research.

Concerning nurses' practices, the present study findings had revealed that a significant improvement in nurses' practices immediately post and follow up intervention. This result is in the same line with [18] conducted a quasi-experimental pre- and posttest study aimed to evaluate the workshops' effectiveness in improving senior nursing students' knowledge and self-efficacy in the provision of labor support in the Mid-Atlantic United States founded that improvement in students' confidence in the provision of labor support after the workshop, inclusion of educational activities which address labor support are imperative. Additionally, this result is in the same line with the present study [16] conducted a pretest/posttest descriptive study aimed to design, implement, and evaluate a nursing theory and evidence-based educational program on professional labor support in the Midwest United States who reported that a highly significant improvement in nurses' practices regarding supportive measures

during labor post guidelines compared to pre guidelines. Thus, there is a clear role in continuing professional development activities of nurses which have ultimate reflection on improving parturient women's care services.

Additionally, it was observed from present study findings that highly significant relations between nurses' knowledge and their practices. This because nurses' knowledge was considered the base for their practices. This result was supported by [15] conducted a survey-guided education aimed to improve nursing self-efficacy for labor support techniques and implementation of the coping with labor algorithm in the United States who found a highly significant relation between obstetric nurses' knowledge and their practices.

Moreover, the present study findings had pointed out our attention toward the importance of implemented guidelines contribute to the development and updated nurses with advanced knowledge regarding supportive measures during labor and enhance nurses' practices. Moreover, the majority among studied sample was suggested to replicate the present study guidelines to other nurses in another setting in the future to enhance nurses' knowledge and practices. The present study findings was supported with [19] conducted a cross-sectional survey aimed to evaluate medical students' satisfaction with simulation based learning strategy in Riyadh, Saudi Arabia who demonstrated that maternity nurses have been become more satisfied post the implemented guidelines compared to pre guidelines.

Finally, the present study findings illustrated that the main barriers that prevent nurses to comply with the implemented supportive measures guidelines for laboring women were due to shortage of nursing staff, increasing sudden emergencies cases and mothers' misconceptions regarding nursing care provided during labor (90%, 87.5%, 87.5% respectively). The present study findings were on the same line with the study [11] conducted a comparative descriptive study aimed to investigate parturient women's self-reported measures compared with nurses' compliance with supportive measures during labor in the Mansoura University Hospitals, Egypt found that too much emergency situation and work load were the main barriers that prevent them to comply with supportive measures during labor.

5. Conclusion

There was a highly significant improvement in nurses' knowledge and practices immediately post and following guidelines compared to pre guidelines. Also the majority of the studied samples were satisfied with the implemented guidelines. So the present study hypothesis was significantly approved with the aim of the present study.

6. Recommendations

- Implementation of labor supportive measure guidelines in different childbirth units to improve nurses' practice.

7. Further Study

- Investigate parturient woman's satisfaction with childbirth process after implementing of labor supportive measures.
- Study effect of labor supportive measures on childbirth process out-come.
- Reapplication of the present study in another setting and on a large sample size.

Source of Funding

Ethical Approval

Reported research was approved by institutional/national Ethics committee at Nursing Faculty Ain-Shams University.

Acknowledgements

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] United Nations (2015) Sustainable Development Goals (SDGs) to 2030.

[2] Kyei-Nimakoh, M., Carolan-Olah, M. and Mccann, T. (2017) Access Barriers to Obstetric Care at Health Facilities in Sub-Saharan Africa: A Systematic Review. *Systematic Reviews*, **6**, Article No. 110. https://doi.org/10.1186/s13643-017-0503-x

[3] World Health Organization (2018) WHO Recommendations Intrapartum Care for a Positive Childbirth Experience. World Health Organization, Geneva, 12.

[4] Lawn, J., Blencowe, H., Waiswa, P., Amouzou, A., Mathers, C. and Hogan, D. (2018) Stillbirths: Rates, Risk Factors, and Acceleration towards 2030. *The Lancet*, **387**, 587-603. https://doi.org/10.1016/S0140-6736(15)00837-5

[5] Bhutta, Z., Das, J.K., Bahl, R., Lawn, J.E., Salam, R.A. and Paul, V.K. (2014) Can Available Interventions End Preventable Deaths in Mothers, Newborn Babies, and Stillbirths, and at What Cost? *The Lancet*, **384**, 347-370. https://doi.org/10.1016/S0140-6736(14)60792-3

[6] Leifer, G. and Keenan-Lindsay, L. (2020) Chapter 7. Pain Management during Labor and Birth. In: Leifer, G. and Keenan-Lindsay, L., *Leifer's Introduction to Maternity and Pediatric Nursing*, 1st Edition, Saunders Canada, Montreal, 171-179.

[7] Tunçalp, Ö., Were, W.M., MacLennan, C., Oladapo, O.T., Gülmezoglu, A.M. and Bahl, R. (2015) Quality of Care for Pregnant Women and Newborns—The WHO Vision. *BJOG*, **122**, 1045-1049. https://doi.org/10.1111/1471-0528.13451

[8] Ith, P., Dawson, A. and Homer, C.S. (2013) Women's Perspective of Maternity Care in Cambodia. *Women and Birth*, **26**, 71-75.

https://doi.org/10.1016/j.wombi.2012.05.002

[9] Iliadou, M. (2012) Supporting Women in Labour. *Health Science Journal*, **6**, 385-391.

[10] Najafi, T., Roudsari, R. and Ebrahimipour, H. (2017) The Best Encouraging Persons in Labor: A Content Analysis of Iranian Mothers' Experiences of Labor Support. *PLoS ONE*, **12**, e0179702. http://journals.plos.org
https://doi.org/10.1371/journal.pone.0179702

[11] Elmashad, H., El-Sayed, H. and Elkayal, M. (2018) Investigate Parturient Women's Self-Reported Measures Compared with Nurses Compliance with Supportive Measures during Labor. *International Journal of Nursing Didactics*, **8**, 11-21.
https://doi.org/10.15520/ijnd.v8i06.2192

[12] Sayed, G., Ragab, K. and Talaat, A. (2015) Effect of Instructional Supportive Nursing Ethics Guidelines on Managing Nurses Knowledge and Performance. Doctorate Thesis, Ain Shams University Hospital, Cairo.

[13] Hoa, L.T. (2015) Factors Related to Professional Labor Support Behaviors among Intrapartum Nurses in the Northeast of Vietnam. Thesis, Burapha University, ChonBuri. http://digital_collect.lib.buu.ac.th/dcms/files/56910321.pdf

[14] Murn, N. (2019) Mothering the Mother: An Educational Program for Nurse-Provided *Continuous Labor Support*, **28**, 199-209.
https://doi.org/10.1891/1058-1243.28.4.199

[15] Page, K. (2020) Improvement of Nursing Self-Efficacy for Labor Support Techniques and Implementation of the Coping with Labor Algorithm. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, **49**, S44.
https://doi.org/10.1016/j.jogn.2020.09.076

[16] Bagley, C. (2015) Promoting Professional Labor Support through Education. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, **44**, S71.
https://doi.org/10.1111/1552-6909.12646

[17] Ross-Davie, M., Cheyne, H. and Niven, C. (2013) Measuring the Quality and Quantity of Professional Intrapartum Support: Testing a Computerized Systematic Observation Tool in the Clinical Setting. *BMC Pregnancy and Childbirth*, **13**, Article 163. https://doi.org/10.1186/1471-2393-13-163

[18] Burgess, A., Morin, L. and Shiffer, W. (2019) A Labor Support Workshop to Improve Undergraduate Nursing Students' Understanding of the Importance of High Touch in a High-Tech World. *The Journal of Perinatal Education*, **28**, 142-150.
https://doi.org/10.1891/1058-1243.28.3.142

[19] Agha, S., Alhamrani, A. and Khan, M. (2015) Satisfaction of Medical Students with Simulation-Based Learning. *Saudi Medical Journal*, **36**, 731-736.
https://doi.org/10.15537/smj.2015.6.11501