Assessment of Nurse-midwives' Knowledge, and Practice in Delivery Room at Al-Najaf City

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Abstract- **Objectives:** To identify the nurse-midwives' socio demographic characteristics and to assess the nurse-midwives' knowledge and practice in the delivery room.

Methodology: A descriptive study designed to found relationship between Nurse-midwives' Knowledge, and Practice in Delivery Room in Al-Najaf Al-Ashraf from 3 February to 10 November 2019.

Results: The findings of present study indicate more than 41% of the study sample between age group (23- 36) years old, (90.6%) live in rural area, (56.5%) of the participants are primary school graduated, their participation of training is (72.9%) and (44.7%) of women have from 1-4 time training, their employed years numbers >10 years (45.9%), their income high is (44.7%), their marital status for married (75.3%), the employed have children is (76.5%), the employed have 4-6 children number is (36.5%).

Conclusion: The study confirms that there is a significant relationship between the nurse-midwife knowledge and their demographic characteristics of age, years of employment, and income. There is significant correlation between the nurse-midwife practice and the level of education.

Recommendation: Preferably installing in-service education programs with efficient training courses to upgrade the techniques necessary to assess, evaluate, and improve the quality of care rendered for in labor woman throughout stages of labor and provide the nurses-midwives with efficient training courses, regarding the proper practices to be hold in delivery room to take care of the laboring women and updating their knowledge. Implementation of the partograph in delivery room after conducting an educational training courses for the nurse-midwives for how to use it in order to change their malpractices and updating their knowledge with regular supervision on their performance. Also giving opportunities for nurse-midwives to participate in organizations, conferences, and study projects to promote their levels of knowledge & practices.

Index Terms- Nurse-midwife, knowledge, practice, delivery room.

I. INTRODUCTION

The Delivery room is a place in the hospital used for deliveries of babies under the supervision of medical staff. Labor is the series of events by which uterine contractions and abdominal pressure expel the fetus and placenta from the women's body. Regular contractions cause progressive dilatation of the cervix and sufficient muscular force to allow the baby to be pushed to the outside. It is a time of change, both an ending and a beginning, for the women, the fetus, and the family(Suliman & Ahmed, 2015). Labor and birth require the women to use all the psychological and physical coping methods she has available. Regardless of the amount of childbirth preparation and the number of times she has been through the experience previously, she needs family-focused nursing care, because childbirth marks the beginning of a new family structure. This is further emphasized by the National Health Goals. The laboring and birthing process is a life-changing event for many women. Nurse-midwife need to be respectful, available, encouraging, supportive, and professional in dealing with all women. Nursing management for labor and birth involves assessment, comfort measures, emotional support, information and instruction, advocacy, and support for the partner(Sethi, Tholandi, Amelia, Pedrana, & Ahmed, 2019)

The health of mothers and their infants is of critical importance, both as a reflection of the current health status of a large segment of our population and as a predictor of the health of the next generation. Addresses maternal health in two objectives: reducing maternal deaths and reducing maternal llness and complications due to pregnancy. In addition, another objective addresses increasing the proportion of pregnant women who attend prepared childbirth classes(Shkrawe & Alyasiry, 2005)

Labor normally begins when a fetus is sufficiently mature to cope with extra uterine life, yet not too large to cause mechanical difficulties with birth. The trigger that converts the random, painless Braxton Hicks contractions into strong, coordinated, productive labor contractions. In some instances, labor begins before the fetus is mature (preterm birth). In others, labor is delayed until the fetus and the placenta have both passes beyond the optimal point for post-term birth (Bimbashi, Ndoni, Dokle, & Duley, 2010)

Nurse in the delivery room must have knowledge and understanding about labor and delivery. Knowledge, information and techniques needed to diagnosis and treat pregnancy women, and knowledge of principles and processes for providing pregnant women care services and evaluation of pregnancy satisfaction. Also knowledge about methods for training design, teaching and instruction for individuals and groups, and the measurement of training effects especially in colleges and knowledge of procedures for diagnosis, treatment, and rehabilitation of physical and mental dysfunctions, and for career counseling and guidance in hospitals. The knowledge of management principles involved in strategic planning, human resource modeling, leadership

technique, production methods, and coordination of people and resource is very important for head nurse(Bradley et al., 2017).

Approximately 11% of singleton pregnancies are delivered preterm and 10% of all deliveries are post-term. Thus, nearly 80% of newborns are at full term, although only 3-5% of deliveries occur on the estimated due date. The number of patients who go into spontaneous labor has decreased, and the percentage of inductions (iatrogenic labor) has increased to 22% of all pregnancies. The prevalence of normal delivery in Iraqi hospitals is 72.8 %(Elamin & Ahmed, 2018)

During labor and delivery, the Nurse–Midwives should administer sensitive and appropriate care, based on the particular needs of the client and her family. They require two-fold effort to assess labor progress and use personal skills to assess the client and family's needs during this physically and emotionally stressful time. The aim of the care in normal birth is to achieve a healthy mother and fetus with least possible level of interventions that are compatible with the safety(Granado et al., 2016)

Nurse-midwife can help to achieve these goals by closely monitoring women during labor and birth and by teaching women as much as possible about labor so that they are able to use as little analgesia and regional anesthesia as possible. The investigator tries to highlight the Nurse-Midwives role in the delivery room toward using proper and healthy practices compatible with good knowledge throughout stages of labor(Boateng, Kumi, & Diji, 2019)

Statement of problem:

Assessment of nurse-midwives' knowledge and practice in the delivery room at Al-Najaf City

1. To identify the nurse-midwives' socio-demographic characteristic
2. To assess nurse-midwives' knowledge and practice.
3. To find out the association between the nurse-midwives' knowledge with their practice in delivery room.

Design of the study:

Quantitative research non probability (purposive sample) from 5 February to 20 April 2019.

Setting of the study

The study was carried out in delivery rooms in Al-Najaf Al-Ashraf hospitals.

The sample of the study:

A purposive sample of (85) nurse-midwives who were working at the delivery rooms of hospitals at Najaf City were selected.

II.   RESULTS

Table (1) : Socio-demographic data of the study sample

Variables		Frequency (total 300)	Percentage (%)
Age (years)	≤ 22	1	12
	23-36	35	41.2
	37-49	28	32.9
	50 ≤	21	24.7
Hospital Region	rural	77	90.6
	urban	8	9.4
Level of Education	Midwifery course	48	56.5
	Midwifery institutes	19	22.4
	Nursing school	11	12.9
	Nursing college	7	8.2
Participation of the training	Yes	62	72.9
	no	23	23.1
Number of training	0	23	27.1
	1 - 4	38	44.7
	5 - 7	20	23.5
	8 - 11	2	2.4
	12≤	2	2.4
Employment years	< 5 years	34	40
	5-10	12	14.1
	> 10 years	39	44.9
income	High	38	44.7
	Middle	23	27.1
	low	24	28.2
Marital status	Married	64	75.3
	Single	10	11.8
	Divorce	4	7.1

	Widow	5	5.9
Have children	Yes	65	76.5
	No	20	23.5
Number of children2	<= 0	20	23.5
	1 – 3	9	10.6
	4 – 6	31	36.5
	7 - 8	20	23.5
	9+	5	5.9
Total		85	100

Table 1 shows that more than 41% of the study sample between age group (23- 36) years old, (90.6%) live in rural area, (56.5%) of the participants are primary school graduated, their participation of training is (72.9%) and (44.7%) of women have from 1-4 time training, their employed years numbers >10 years (45.9%), their income high is (44.7%), their marital status for married (75.3%), the employed have children is (76.5%), the employed have 4-6 children number is (36.5%).

Table (2) : Distribution of the Study Sample by Their Overall Evaluation of Levels Knowledge Results

Variables		frequency	percentage
Knowledge first stage	Good	14	16.5
	Middle	**44**	**51.8**
	Low	27	31.8
Knowledge second stage	Good	4	4.7
	Middle	38	44.7
	Low	**43**	**50.6**
Knowledge third stage	Good	11	12.9
	Middle	**61**	**71.8**
	Low	13	15.3
Knowledge evaluation	Good	1	1.2
	Middle	**47**	**55.3**
	Low	37	43.5
Total		85	100.0

This table shows the distributed in regarding to the first stage of the middle knowledge is (51.8%), to the second stage of the low knowledge is (50.6%), to the third stage of the middle knowledge is (71.8%), and knowledge evaluation for all stages is middle knowledge (55.3%).

Table (3): Distribution of the Study Sample by Their Overall Evaluation of Levels Practice Results

Variables		frequency	percentage
practice first stage	Good	1	1.2
	middle	20	23.5
	Low	**64**	**75.3**
practice second stage	Good	2	2.4
	middle	**53**	**62.4**
	Low	30	35.3
practice third stage	Good	2	2.4
	middle	29	34.1

	Low	**54**		**63.5**
practice evaluation	Good	1		1.2
	middle	39		45.9
	Low	**45**		**52.9**
Total		85		100

This table shows the distributed in regarding to the first stage of the low practice is (75.3%), to the second stage of the middle practice is (62.4%), to the third stage of the low practice is (63.5%), and practices evaluation for all stages is low practice (52.9%).

Table (4) Correlation of the knowledge by their General Information

variable		Knowledge			Total	p-value
		Good	middle	Low		
Age	≤22	0	1	0	1	**0.04**
	23-36	0	17	18	35	
	37-49	0	15	13	28	
	50+	1	14	6	21	
total		1	47	37	85	
address	Rural	1	41	35	77	0.094
	urban	0	6	2	8	
total		1	47	37	85	
Level of education	preparatory	1	28	19	48	0.459
	institute	0	8	11	19	
	College	0	7	4	11	
	Nursing course	0	4	3	7	
total		1	47	37	85	
Participation of training	Yes	1	35	26	62	0.318
	no	0	12	11	23	
Total		1	47	37	85	
Number of training	non	0	12	11	23	0.129
	1-4	0	20	18	38	
	5-7	1	12	7	20	
	8-11	0	1	1	2	
	≥12	0	2	0	2	
Total		1	47	37	85	
Employed years number	<5 years	0	18	16	34	**0.03**
	5-10 years	0	3	9	12	
	>10 years	1	26	12	39	
total		1	47	37	85	
Income	High	0	19	19	38	**0.047**

	Low	0	12	12	24	
	middle	1	16	6	23	
Total		1	47	37	85	
Marital status	married	1	37	26	64	
	Single	0	6	4	10	
	Divorce	0	2	4	6	0.165
	widow	0	2	3	5	
total		1	47	37	85	
Have children	yes	1	36	28	65	
	No	0	11	9	20	0.412
Total		1	47	37	85	
NO. of children	≤0	0	11	9	20	
	3-Jan	0	3	6	9	
	6-Apr	0	18	13	31	
	8-Jul	1	11	8	20	0.141
	9+	0	4	1	5	
Total		1	47	37	85	

*significant at p-value ≤ 0.05

This table shows the correlation between the study sample knowledge percentile results and their different general information which indicated that age at p-value (.04), employed years at p-value (.03), and income at p-value (.047). While other variable have no significant (N.S) relationship (p. value more than 0.05).

Table (5) Correlation of the Practice by their General Information:

Variable		Practice			Total	p-value
		good	middle	low		
Age	≤22	0	1	0	1	
	23-36	0	19	16	35	
	37-49	1	10	17	28	0.165
	50+	0	9	12	21	
Total		1	39	45	85	
address	Rural	1	33	43	77	
	Urban	0	6	2	8	0.271
Total		1	39	45	85	
	preparatory	0	22	26	48	0.318

Level of education	institute	1	6	12	19	
	College	0	9	2	11	
	Nursing course	0	2	5	7	
Total		1	39	45	85	
Participation of training	Yes	1	29	32	62	0.376
	No	0	10	13	23	
Total		1	39	45	85	
Number of training	≤0	0	10	13	23	0.212
	1 - 4	0	17	21	38	
	5 - 7	1	10	9	20	
	8 - 11	0	1	1	2	
	12+	0	1	1	2	
Total		1	39	45	85	
Employed years number	<5 years	0	19	15	34	0.224
	5-10 years	0	4	8	12	
	>10 years	1	16	22	39	
Total		1	39	45	85	
Income	High	1	16	21	38	0.271
	Low	0	14	10	24	
	Middle	0	9	14	23	
Total		1	39	45	85	
Marital status	married	1	28	35	64	0.388
	Single	0	5	5	10	
	Divorce	0	3	3	6	
	Widow	0	3	2	5	
Total		1	39	45	85	
Have children	Yes	0	29	36	65	0.2
	No	1	10	9	20	
Total		1	39	45	85	
Number of children	≤0	1	10	9	20	0.506
	3-Jan	0	3	6	9	
	6-Apr	0	12	19	31	
	8-Jul	0	10	10	20	
	9+	0	4	1	5	
Total		1	39	45	85	

*significant at p-value ≤ 0.05

This table shows the correlation between the study sample practice percentile results and their different general information which indicated that only level of education at p-value (.001). While other variable have no significant relationship (p. value more than 0.05).

III.   DISCUSSION

In the present study, the characteristics of samples from the nurse-midwives in Al-Zahraa Teaching Hospital & Al-Hakeem Hospital are 85 nurses. Throughout the course of the present study which refers to the statistically distribution of the observed frequencies, percentages of some related demographical characteristics variables for all the nurses samples, as shown in Table (1) illustrates that the highest percentage (41.2%) of the nurse-midwives ages was (23-36) years, (56.5%) of them was midwifery Preparatory graduates, & (75.3%) of them was married. This finding is in agreement with result done by (Schuiling, Sipe, & Fullerton, 2015) that average age of nurse midwife staffs are between (25-35) year and have at least midwifery school certificate.

Table (2) & (3) presents that the highest percentage (44.7%) of participants having knowledge & practice in maternity hospitals between (1- 4) years while (23.5 %) of them having (5-7) years' experience of work in delivery rooms, (27.1 %) of them do not having any training courses during their experiences, (2.4 %) of them having (8-11) time, and (2.4%) of them having more than 12 time of training course these findings are in settlement with (Hou et al., 2018) study that states the young age of nurse midwife staff in labor room have strong relationship with their lack of training opportunity and their experience.

It was shown in (Table 1) that the higher percentage (21.2%) of (23-36 years) and over and the lowest percentage (1.2%) of them was in age group (≤ 22years). Regarding the level of education, the highest percentage (56.5%) of the study participants was midwifery preparatory graduate. Regarding marital status, the majority (75.3%) of the participants was married. This is something that can be expected with such population due to the nature of their profession as female oriented has been mentioned in (Shkrawe & Alyasiry, 2005). It was revealed from (Table 1) that the highest percentage (45.9%) of them was employed for (more than 10) years. While, (14.1%) of them spent between (5-10) years of employment in midwifery and (21.4%) had spent less than (5) years of their employment in midwifery .(Onibokun & Akpa, 2016) study claims that it is so essential for nurse midwife who work in critical ward such as labor room to have enough experience though years of employment for dealing with pregnant women during child birth. Regarding training courses in midwifery, the highest percentage (44.7%) of them has the opportunity to be enrolled or participated in training courses ranging between (1-4) courses. While, (27.1%) of them do not have any training courses. It was found that in-service training is essential to ascertain that midwives' skills and their understanding quality of care have been updated to maintain high quality in their nursing and midwifery practices and give them the opportunity for high quality of performance(Granado et al., 2016).

The results presented a high mean of scores in nurse-midwives' knowledge regarding the stages of labor in all items, such as the physiology of labor, signs and symptoms, episiotomy, conduction of delivery, and cord clamping and cutting. It was stated that nurses' knowledge is vital at all levels of nursing practices Knowledge and their impact on interactions with health care of women in delivery room are essential to prevent complications of labor also been suggested by other studies (Sethi et al., 2019). Labor support is an important part of this experience, since it influences women's classification of the birth experience as a positive or negative. By understanding professional labor support, intrapartum nursing knowledge can be advanced and help professional labor support interventions which can enhance the delivery process for all women. This study was in agreement with the study done by (Elamin & Ahmed, 2018) regarding nurse-midwives' practices in nursing interventions in second stage of labor, concerning their performance in perineal preparation and cleanliness and sterilization during actual conduct of delivery.

IV.   CONCLUSION

1. The highest percentage of nurse-midwife's knowledge in delivery room is middle level or acceptable (55.3%).
2. The highest percentage of nurse-midwife's practice in delivery room was low level (52.9%).
3. The correlation between the study sample knowledge percentile results and their demographic characteristics of age, employed years, and income have strong relationship and statistically significant in P-value≤0.05. The correlation between the study sample practice percentile results and their demographic characteristics indicated statistical significance at level of education.

V.   RECOMMENDATION

1- Installing in-service education programs with efficient training courses to upgrade the techniques necessary to assess, evaluate, and improve the quality of care rendered for in labor woman throughout stages of labor and provide the nurses-midwives with efficient training courses, regarding the proper practices to be hold in delivery room to take care of the laboring women and updating their knowledge.

2- Implementation of the partograph in delivery room after conducting an educational training courses for the nurse-midwives for how to use it in order to change their malpractices and updating their knowledge with regular supervision on their performance.

3- Giving opportunities for nurse-midwives to participate in organizations, conferences, and study projects to promote their levels of knowledge & practices.

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