Knowledge, Practices, and Attitudes of Nurses Regarding Non-Pharmacological Pain Management in the Midwifery Ward

Shahla Shkak Shareef; *Department of Nursing, College of Nursing, Hawler Medical University, Kurdistan Region- Iraq.*
(*Correspondence:* shahlashkak89@gmail.com)
Tiran Jamil Piro; *Department of Nursing, College of Nursing, Hawler Medical University, Kurdistan Region- Iraq.*

ABSTRACT

Background and Objectives: Pregnant women are frequently worried about labor pain, and it is usually the most important problem for them and their relatives. Non-pharmacological pain relief methods provide several benefits, such as no harmful effects on the fetus or baby, no interruption of labor, and even being pleasurable for the mother and fetus. The aim of this study was to assess the nurse's knowledge practice and attitude toward non-pharmacological pain management methods in the delivery room in Erbil Governorate.

Method: The descriptive cross-sectional design was utilized to determine nurses' knowledge, practices and attitudes about labor pain and non-pharmacological pain management, as well as to monitor nurses' practices in the delivery rooms during labor and delivery. A total of 78 nurses from public and private hospitals in Erbil Governorate participated in the study. Structured questionnaires and an observational checklist were used to collect data and used SPSS version 26 was used to analyze it.

Result: Nurse's knowledge (N=27, 50.0%), (N=9, 37.5%) in public and private hospitals was at a good level, and they had a positive attitude (N=32, 59.3%) in public hospitals and a positive attitude (N=14, 58.3%) in private hospitals. But had a fair practice (N=19, 35.18%) in public hospitals and good practice (N=10, 41.7%) in private hospitals towards labor pain and non-pharmacological pain management. This is due to the lack of time, inadequate staff and the great workload of the staff.

Conclusion: This survey showed that the knowledge of most of the nurses was at a good level, but it was weak in items such as (cold therapy, acupuncture and acupressure technique), as well as majority of them do the following practices: relaxation technique, give psychological support and, ensure that women's relatives are there during the entire labor process; and they do not use other types of non-   Pharmacological pain reliving method like: hypnosis, ice packs, intradermal water block. It is required to design a pain-relieving non-pharmacological training course for nurses.

Keywords: Labor pain; Non-pharmacological; Nurses.

INTRODUCTION

Pregnancy is one of the most crucial and wonderful times in a mother's life. It finishes with the birth of a baby during the labor phase. Labor pain is one of the most terrible experiences. Because it is an inevitable aspect of the birth process, this pain is unique from others. It is not a sign of injury or tissue damage; it declines naturally, is regular and consistent, eventually becomes tight, and leads to a wonderful event, childbirth. Some delivery positions are more painful than others, such as lying on your back. Changing postures and being mobile throughout labor might help to alleviate discomfort. Amniotomy, vaginal examinations, and monitoring can all cause discomfort by restricting a woman's movement or generating concern Analgesics are now seldom used for pain management during delivery due to maternal and newborn complications, and non-drug and complementary medicine options are growing more prominent [1].Labor ache is a horrible, complicated, and highly personalized experience that includes either sensory or emotional elements. The way the woman handles childbirth and how it manifests physically and mentally might affect how much pain she experiences. For women of all races and cultures seeking services for childbirth in hospitals, pain management may be of the highest significance and a crucial part of therapy. Many women may benefit from the midwifery style of treatment since it highlights the usual natural process of labor and delivery in low-risk pregnancies and encourages the use of non-pharmacological approaches [2].True labor starts when the female has bloody flow, her membranes tear, and she has severe uterine contractions that produce cervical effacement and dilation. The specific pathophysiology that causes this to happen is unknown. It is essential to identify between real and fake labor. A characteristic of the first one is the onset of uterine contractions every three to five minutes, lasting 20 to 60 seconds, at regular intervals. When labor begins, uterine contractions do not stop, and the uterine cervix dilates as a result. Inconsistent contractions and cervical dilatation, often known as Braxton-Hicks contractions, are the markers of false labor. In particular, for nulliparous women, false contractions become more frequent during the 31st week of pregnancy, generating confusion and concern [3].Abdominal pains, pelvic pain, and backache are common symptoms of labor pain. Women who have gone through labor recall the high intensity of the pain and categorize it as mild, moderate, or severe, with the severity rising from the start of contractions to full dilation of the cervix Pain during labor can be either physiological or psychological/emotional. Fear, uncertainty, and a lack of knowledge can all exacerbate emotional pain. Even though it won't fix the issue, childbirth education is a good strategy to address it. The lower uterine segment and cervix dilate in the early stages of labor, which causes pain. The fetus' descent down into the birth canal produces distension and tearing of tissues in the vagina and perineum in the late first and second phases of labor, resulting in discomfort. Dilation and labor could be slowed down, which would make them more painful if the woman holds her breath and attempts to fight off the contractions. The woman's posture is crucial during the childbirth process [4].Suffering throughout delivery should be seen as a real phenomenon that poses no harm to a mother's pregnancy; nonetheless, most of these events rely on the assistance of midwives during labor pain. Individual characteristics of midwives, such as years of work or

experience and the number of births performed, may impact or effect on labor pain evaluation and management methods [5].Healthcare practitioners must assist women with pain management during childbirth [6].Moms were attended by experienced women, most generally known as traditional birth attendants, in the centuries past, and monitoring was held at their homes. The carers performed prayers, created herbal mixtures, and utilized charms to help lessen the discomfort of contractions [7].Proper delivery practices are those that are closely linked to the humanization phase of obstetric care. These should include, among other things, autonomy, respect for women's and families' rights, empathic support for health professionals, encouragement to adopt noninvasive and non-pharmacological pain relief methods, freedom of position, and clinical practice based on current evidence, according to WHO recommendations [8].Since the dawn of time, humans have been aware of pain and have attempted to manage it in various ways. There are two main approaches for alleviating and controlling pain during childbirth. Pharmacological therapies are typically expensive and have undesirable side effects. Pharmacological therapy is used to alleviate pain. It's a common practice found in many nations across the world. The most common prescriptions are analgesic drugs like Entonox, epidural analgesia, diamorphine, tramadol, and pethidine.Physically, the pain would be reduced, but the mothers' psychological and emotional well-being would be overlooked. Receiving opioid pain relievers such as pethidine is one alternative for pharmacological pain treatment. Also, non-pharmacological therapies are used to control pain. Some techniques include changing positions, movement, and progressive muscle relaxation, which can happen through yoga, listening to music, and using breathing techniques. Some other therapies include hydrotherapy, acupressure, acupuncture, massage, hypnosis, aromatherapy, hot and cold applications, and transcutaneous electrical nerve stimulation. A more therapeutic approach will help lower the pain threshold or divert attention away from the discomfort of childbirth [9].Around the world, medication therapies are commonly used during labor and delivery. Despite the fact that epidural analgesia is regarded to be a good painkiller, it is not always associated with a positive delivery experience. Furthermore, this sort of pain therapy is expensive, can impair women's sense of competence, lengthen the second stage of labor, and increase the likelihood of subsequent interventions (such as instrumental birth or cesarean surgery) [10].Non-pharmaceutical, psychological, and physiological treatments are the three main categories of childbirth pain management treatments. Non-pharmacological pain relief methods provide several benefits, such as inexpensive, no harm to the woman, her baby, or the course of the birth and no interruption with labor, and even being pleasurable for the mother and fetus. The nurse's primary key responsibilities are to find the issues of the woman in labor, provide appropriate information about different modalities of pain relief during labor, assist the women in labor in ventilating all of their doubts through interpersonal interactions, assist the women in labor in choosing the appropriate modality for effective pain relief, and to effectively apply alternative modalities of pain management throughout the first phase of labor, thereby reducing the risk of complications [11].

METHODS

In Erbil Governorate, a cross-sectional study was conducted in public and private hospitals. Data were collected by using a non-Probability (Purposive Sample) technique. The inclusion criteria composed all nurses working in delivery room and exclusion criteria included the nurses who had at least one year of experience in delivery room. Data was collected through an observational checklist and format for a questionnaire. The questionnaire consists of 4 parts. Part one includes socio- demographic characteristics and professional background of the nurses this part contains information like (age, marital status, academic qualification, length of experience in the delivery room, working shift, satisfaction in the workplace, participation in a non-pharmacological pain management training course, the number of mothers who are responsible by the nurse at the same shift, and types of pain management during labor for reliving labor pain). Part two related nurses' knowledge of labor and non-pharmacological pain management during labor by 40 items assessed. The total average means of all items is about 2.47 of a standard deviation 0.53, so the statistical analysis revealed that the means value of all items was more than the standard of study value ≥2.34. This part revealed a high acceptance rate, and this shows the high level of all the questions about the knowledge of nurses about labor pain and management. The queistonerie was scored by following the scoring protocol by providing a corresponding letter relating to the chosen answer for frequency of consumption ranging from 1(I don't know), 2 (incorrect), 3(correct).Part three related to nurses' practices about different methods of non-pharmacological pain management during labor and was assessed by 27 items scored Likert scales, which is about 27 items reached a low degree. The total average means of all items is about 1.55 of a standard division of 0.35, so the statistical analysis revealed that the means value of all items was less than the standard of study value 2.34. This part revealed a low acceptance rate, and this shows the low level of all the questions about the practices of nurses regarding applying non-pharmacological pain methods in the delivery room. Part four related to an attitude of nurses regarding pain management during labor, assessed by 22 items, which about 22 items reached a high degree. The total average means of all items is about 2.81 with standard division 0.44, so the statistical analysis revealed that the means value of all items was more than the standard of study value ≥2.34. This part revealed a high acceptance rate, and this shows the high level of all the questions about the attitude of nurses regarding pain management during labor .The study's limitation was Covid-19 Pandemic. In general, people handled the situation delicately and avoided getting too near to one another [28]. The study was accepted by the Nursing Ethical Committee of Hawler Medical University College of Nursing on7 October 2021 number 109, and official authorization was acquired from the Ministry of Health's Director of Health in Erbil. The respondents' rights and confidentiality were protected throughout the study. They were informed and explained the goal of the study as well as the confidentiality of the information through a verbal permission process. Data analysis: Statistical Package for Social Science (SPSS) version 25 was used to analyze and organize the data. The mean and standard divisions for determining the acceptance rate of participants.

RESULTS

Table 1 revealed that most of the sample members were in public hospitals within the category of 39-49 years old, the highest percentage (35.2%), and in private hospitals shows that most of the participants of the sample study were within the category of 28-38 with a percentage of (41.6%). The majority of the sample of the study in both areas (public, private) hospitals was in married marital status, which is about (70.4%, 70.8%). Most of the sample members in public and private hospitals at the level of education hold a secondary school of nursing degree, with a percentage of (25.9% , 25.0%).Regarding working shifts in public and private hospitals, the result indicates that the majority of them working in the circulating formwork is about (35.2% , 29.2%). As for the working experience in delivery rooms in public hospitals, it indicated that most of the participants were in the category 10-20 years, which was about (55.6%), which indicates the hospitals focused on highly experienced nurses. As for the working experience in delivery rooms in private hospitals, it indicated that most of the participants were in the category of less than 10 years, which was about (70.8%). According to the results of the study in public hospitals, hours per day, we have two groups close to each other, and most of them work less than 10 hours a day, which was about (38.9%), While other parts work more than 15 hours a day, with a percentage of (37%).The working hour per day In private hospitals shows the majority of them work more than 15 hours a day which was about (45.8%).

Table 1 : Socio-demographic characteristics of study sample in Public and Private Hospitals

Variables		Public F (%)	Private F (%)
Age group	18-27	6 (11.1)	1 (4.2)
	28-38	17 (31.5)	10 (41.6)
	39-49	19 (35.2)	7 (29.2)
	50 above	12 (22.2)	6 (25.0)
Marital status	Single	12 (22.2)	5 (20.8)
	Married	38 (70.4)	17 (70.8)
	Widowed	3 (5.6)	1 (4.2)
	Divorced	1 (1.9)	1 (4.2)
Academic qualification	Training course	4 (7.4)	4 (16.7)
	Primary school of nursing	6 (11.1)	0 (0)
	Secondary school of nursing	14 (25.9)	6 (25.0)
	Secondary school of nursing department (midwifery)	8 (14.8)	5 (20.8)
	Diploma of nursing	8 (14.8)	2 (8.3)
	Diploma of nursing department (midwifery)	10 (18.5)	1 (4.2)
	College of nursing	3 (5.6)	3 (12.5)
	College of nursing department (midwifery)	1 (1.9)	3 (12.5)
Working shift	Morning	12 (22.2)	5 (20.8)
	Evening	8 (14.8)	3 (12.5)
	Night shift	15 (27.8)	4 (16.7)
	Circulating	19 (35.2)	7 (29.2)
Working experience in delivery room	< 10	18 (33.3)	5 (20.8)
	10-20	30 (55.6)	17 (70.8)
	> 20	6 (11.1)	7 (29.2)
Working hours per day	< 10	21 (38.9)	8 (33.4)
	10-15	13 (24.1)	5 (20.8)
	> 15	20 (37.0)	11 (45.8)
	Total	**54 (100)**	**24 (100)**

Table 2 revealed that the majority of nurses in public were satisfied with working in the delivery room, which is about (98.1%).

According to the study sample, all nurses did not participate in any training course about pain . management of labor, with a percentage (100%).

Table 2: Personal Information in the Public hospitals

Items		F	(%)
Are you satisfied with working in delivery room?	Yes	53	(98.1)
	No	1	(1.9)
	Total	**54**	**(100.0)**
Did you participate in training course about pain management of labor?	No	54	(100.0)
How many mothers are you responsible for at the same time in your working shift?	Less than 5	11	(20.4)
	5-10	35	(64.8)
	More than 10	8	(14.8)
	Total	54	(100)
Do you apply any pain management methods for women in labor?	Yes	54	(100.0)

Table 3 shows that all of the nurses were satisfied with working in the delivery room, which is about (100%). As a result of the study sample, the majority of nurses did not participate in any training course about pain management of labor, with a percentage (95.8%), while one nurse participated in the training course 5 years ago.

Table 3: Demographic Information in the Private Hospitals

Items		F	(%)
Are you satisfied with working in delivery room?	Yes	24	(100)
Did you participate in training course about pain management of labor?	Yes	1	(4.2)
	No	23	(95.8)
A. If yes, when did you participate in such training course?		23	(95.8)
	5 Years Ago	1	(4.2)
B. If yes, how much time did it long?	1 Day	1	(4.2)
	Total	**24**	**(100)**

Table 4 shows levels of nurses' responses in the public and private hospitals regarding knowledge of nurses about labor pain and management and practices of nurses regarding applying non-pharmacological pain methods in the delivery room. The result in public hospitals was as follows: (50%) of nurses were at a good level, while (16.7%) were at a fair level, and (33.3%) of them were at a poor level, and in private hospitals knowledge of nurses about labor pain and management was as follows: (37.5%) of nurses were at a good level, while (33.33%) were at a fair level, and (29.16%) of them were at a poor level. The performance of nurses in public hospitals regarding the use of non-medicinal pain methods in the delivery room is as follows: 31.48% at a good level, 35.18% at a fair level and (33.33%) at a poor level, also in private hospitals using non-medicinal pain methods in the delivery room, it was as follows: (41.7%) of nurses were at good level, (25.0 %) at the appropriate level and 33.3% at a poor level.

Table 4: Levels of the knowledge, and practices in the Public and private Hospitals

Overall Level	Public Hospitals			Private Hospital		
	Good	Fair	Poor	Good	Fair	Poor
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
Knowledge of nurses about labor pain and management	27(50)	9(16.7)	18 (33.3)	9(37.5)	8(33.33)	7 (29.16)
Practices of Nurses regarding applying non pharmacological pain methods in delivery room	17 (31.48)	19 (35.18)	18 (33.3)	10 (41.7)	6(25.0)	8(33.3)

Table 5 shows the response levels of public and private hospital nurses regarding nurses' attitudes toward labor pain management as follows: (59.3%) nurses were at the positive level and (40.7%) were at the negative level. While in private hospitals, the results of nurses' attitudes about pain management during labor were as follows: (58.3%) of nurses at good level and (41.7%) at negative level

Table 5: Levels of the attitude in the Public and Private hospital

Overall Level	Public Hospitals		Private Hospital	
	Positive	Negative	Positive	Negative
	F (%)	F (%)	F (%)	F (%)
Attitude of nurses regarding pain management during labor	32 (59.3)	22 (40.7)	14 (58.3)	10 (41.7)

Table 6 shows the comparisons between variables Knowledge, Practice, and Attitude in public hospitals and the private hospital. The results were as follows: the mean value of public hospitals was 2.44, and for private hospitals was 2.55 for items regarding knowledge of nurses about labor pain and management. While public hospitals were 1.46 and for private hospitals were 1.76 for items related to practices of nurses regarding applying non-pharmacological pain methods in the delivery room, and the mean value of public hospitals was 2.80 while the private hospitals were 2.84 for items regarding the attitude of nurses regarding pain management during labor. The result revealed that the knowledge, practice, and attitude in the private hospitals were better and higher compared to the knowledge, practice, and attitude in the public hospitals, with the exception of the sample size difference in these two sectors.

Table 6: Differences between overall level variables knowledge, practice, and attitude in the Public Hospitals and the Private Hospitals

Variables	Public Hospitals		N	Private Hospitals		N
	Mean	Std. Deviation		Mean	Std. Deviation	
Knowledge	2.44	0.527	54	2.55	0.494	24
Practice	1.46	0.283	54	1.76	0.288	24
Attitude	2.80	0.440	54	2.84	0.366	24

DISCUSSION

This study revealed that nurses' knowledge of labor and pain management in public and private hospitals was at a good level. These results were congruent with a study carried out on 87 nurses and midwives done by [24] in Ibadan, Nigeria, which revealed moderate knowledge about labor pain management among their study participants. Also, the finding of the present study is supported by using a simple random sampling study done by [14] among 209 professional nurses, who revealed that nurses had adequate knowledge about non-pharmacological pain management. While these results are not consistent with the result of a previous study done by[18] in Egypt on 88 healthcare providers demonstrated that healthcare professionals are more or less familiar with several of the non-pharmacological methods, this result disagrees with the study done by [19] among 246 nurses who reported that nurses did not have adequate knowledge. Regarding the practices of nurses in private hospitals, it indicated that the majority of nurses had good practice. This may be due to adequate space, staff, and equipment. It comes along with a study done by [21] in Ethiopia on 336 skilled attendants who, revealed that more than half of the study participants had good practice. This is similar to a cross-sectional study carried out by [22] in Ethiopia among 464 healthcare professionals. While the finding of the present study in public hospitals shows that the majority of nurses had fair practice, The possible reasons may be inadequate staff, lack of time, lack of training on non-pharmacological pain management, incorporation of physicians with nurses or nurses with mothers, and lack of staff, this finding is similar to a cross-sectional study done by [20] among 420 obstetric

care providers in Hawassa, also finding comes along with study done in Ethiopia by [13] which revealed that poor practice during labor pain management. Moreover, the results of the present study are supported by [17] in Egypt, who found that about half of the respondents didn't use non-pharmacological methods. The finding of the present study in public hospitals is that more than half of nurses had a fair attitude towards non-pharmacological pain management during labor. The current study's findings are similar to a previous study done by [17] in Ethiopia on 169 nurses, which revealed that the majority of nurses have an unfavorable attitude towards non-pharmacological pain management methods. In private hospitals, it shows that more than half of nurses had a good attitude. This result agrees with the result of a previous descriptive study which was done by [23] in Ethiopia on 299 obstetric caregivers who found that the majority of the study participants had a positive attitude toward labor pain relief methods, and this comes along with a study done by [24] who studied 233 skilled attendants in Tigry region. In this study, the contrasts between knowledge, attitude, and practice were found in both public and private hospitals. The results were as follows: the mean value of public hospitals was 2.44 and for private hospitals were 2.55 for items regarding knowledge of nurses about labor pain and management. While public hospitals were 1.46 and for private hospitals were 1.76 for items related to practices of nurses regarding applying non-pharmacological pain methods in the delivery room, and the mean value of public hospitals were 2.80 while the private hospitals were 2.84 for items regarding the attitude of nurses regarding pain management during labor. It comes along with a study done by [21] in Ethiopia, which revealed that skilled birth attendants who were working at private

primary hospitals were 6.55 times more likely to have good knowledge about labor pain removing methods as compared to skilled birth attendant working at public primary hospitals, this result is similar to the study done by [18] among 88 health-care providers in Abha, Saudi Arabia, which are agreement with the result of the present study in private hospitals and disagreement with the result of present study in public hospitals. Toward the practice of nurses applying non-pharmacological work in the labor world revealed that poor practice in public hospitals compared with private hospitals. This comes along with a study done by [13] in Gamo and Gofa zones that found that practice of non-pharmacological labor pain management was poor in public health facilities; also this finding is similar to a descriptive study done by[27] on 120 nurses at Makkah El-Mukarramah. The result of the present study in private hospitals indicated a positive attitude and good practice of nursing staff regarding non-pharmacological methods .This is supported by cross-sectional study done by[26] on 299 f obstetric caregivers working at labor ward in public health centers of the east Gojjam zone, Amhara region, Ethiopia, which demonstrated that obstetric caregivers who had a positive attitude toward managing labor pain were 2.45 times more likely to use labor pain management methods than those who had a negative attitude for labor pain management. This result is supported by a study done by [16] in Ethiopia who found that nurses with a favorable attitude to non-pharmacology pain management methods were statistically significantly associated with good practice of non-pharmacology pain management. Also, the finding is supported by a study done in Ethiopia by [13] on 272 skilled attendants who revealed that

respondents who had favorable attitudes towards labor pain management were 2.82 times more likely to do good practice than others. Moreover, the results of the present study is supported by [20] in Hawassa city on 305 obstetric care providers who found that a favorable attitude towards labor pain management, were 2.97 times more likely to practice labor pain management compared to their counterparts.

Conclusion

The study concluded that the majority of the nurses in public and private hospitals were with the mean age of 42.00 years old, most of them married, in secondary school, satisfied with working in a delivery room, and did not participate in a training course about pain management of labor. The overall usage of labor pain management strategies by nurses in public hospitals was poor. Nurse's knowledge, practice and attitude had shown statistical significance association with age, level of education and years of experience. Hiring nurses who are graduates from the college of Nursing, especially (department) of midwifery.

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