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Obstetric nurse's role in the care of labor and chilbirth

Atuação da enfermeira obstétrica na assistência ao trabalho de parto e parto

Actuación de la enfermera obstétrica en la asistencia al trabajo de parto y parto

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ABSTRACT

Objective: to describe the managements used by the obstetric nurse in assisting labor and parturition. **Methods**: an observational, descriptive and retrospective study conducted in two maternity hospitals in Maceió-Alagoas with 138 medical records. Data were collected through the partograph and the declaration of live births attached to the medical record. Variables were categorized and described as percentages and categorical variables. **Results**: it was possible to observe that there was no statistically significant difference between institutions (p <0.05), regarding age and education. Considering maternal variables, it was observed that there was a statistically significant difference between institutions (p <0.05) regarding parity, gestational age, maternal position, oxytocin use and complications. **Conclusion**: actions performed by nurses in the care of labor and delivery in this study are within a context of real change of paradigm and attitude towards scientific evidence.
Descriptors: Obstetric nursing; labor, obstetric; parturition; humanized delivery.

RESUMO

Objetivo: descrever as condutas utilizadas pela enfermeira obstétrica na assistência ao trabalho de parto e parto. **Método:** estudo observacional, descritivo e retrospectivo, realizado em duas maternidades de Maceió-Alagoas com 138 prontuários. A coleta de dados se deu por meio do partograma e da declaração de nascidos vivos que ficam anexadas ao prontuário. As variáveis foram agrupadas em categorias e descritas em percentuais e variáveis categóricas. **Resultados:** foi possível observar que não houve diferença, estatisticamente significante entre as instituições (p<0,05) nem em relação à idade, nem escolaridade. Já em relação às variáveis obstétricas, notou-se que houve diferença estatisticamente significante entre as instituições (p<0,05) em relação à paridade, idade gestacional, posição materna, uso de ocitocina e complicações. **Conclusão:** as ações realizadas pelas enfermeiras na assistência ao trabalho de parto e parto neste estudo estão dentro de um contexto de mudança real de paradigma e de postura frente às evidências científicas.
Descritores: Enfermagem obstétrica; parto; trabalho de parto; parto humanizado.

RESUMEN

Objetivo: describir las acciones utilizadas por la enfermera obstétrica para ayudar en el parto y el parto. **Métodos:** estudio observacional, descriptivo y retrospectivo realizado en dos maternidades de Maceió-Alagoas con 138 historias clínicas. Los datos se recopilaron a través del partograma y la declaración de nacimientos vivos adjunta a la historia clínica. Las variables se clasificaron y describieron como porcentajes y variables categóricas. **Resultados:** fue posible observar que no hubo diferencias estadísticamente significativas entre las instituciones (p <0.05), con respecto a la edad y la educación. Considerando las variables maternas, se observó que había una diferencia estadísticamente significativa entre las instituciones (p <0.05) con respecto a la paridad, edad gestacional, posición materna, uso de ocitocina y complicaciones. **Conclusión:** las acciones realizadas por las enfermeras en el cuidado del trabajo de parto y el parto en este estudio están dentro de un contexto de cambio real de paradigma y actitud hacia la evidencia científica.
Descriptores: Enfermería obstétrica; trabajo de parto; parto; parto humanizado.

INTRODUCTION

Normal delivery care has been changing the scenery and care model, transforming itself as regards the understanding of birth as a physiological event[1]. Initially this was treated as a natural event, a woman's divine plan by the original sin in which one could not intervene. It was later considered dangerous, where the woman is a victim and should therefore be controlled. Thus, she was subjected without participation to procedures to rid her of this martyrdom. Through a series of bedside procedures, which were seen as *caring for the parturient*, it gained a concrete expression with the forceps, which allowed for the *visualization* of the struggle of mankind against nature and for the substitution of the non-interventionist paradigm for the idea of childbirth as a man-controlled act[2].

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Thus, there was also a transformation in relation to those who provided childbirth care. Normal birth as a process that took place at home was performed by midwives, women with empirical knowledge about pregnancy, childbirth and puerperium, learned and apprehended, according to the practice, without the scientific mastery of the physiological processes and mechanisms of childbirth. With the decline of the traditional midwife, hospital birth begins to replace home birth, creating conditions for the inclusion of surgical routines in obstetrics, such as episiotomy and prophylactic forceps[3].

From a deeply subjective experience, childbirth is transformed into a privileged moment for the training of physicians. The female body is now interpreted as a machine, and regularity imposes itself as the basic premise of technical and scientific obstetrics. Thus, the place of birth moved from home to the hospital and the process of medicalization of childbirth began, the imperative hospitalization of woman in order to *control* this painful event for the woman and the baby[4].

The involvement of the obstetric nurse in physiological delivery intensifies in the sense of contributing to the humanization of care and promoting the realization of natural birth, using technology appropriately. Thus, the obstetric nurse is one of the professionals who seek the rescue of physiological birth, as a female phenomenon where the woman is the protagonist. A return to care that values women and the parturition process as a personal and unique moment. In this context, the humanist approach is more flexible than techno-medicine in relation to institutional protocols and routines, as well as to other care modalities.

In this sense, this study aimed to describe the conducts used by the obstetric nurse in the care of labor and delivery.

LITERATURE REVIEW

The World Health Assemblies established through diverse resolutions that the involvement of obstetric nurses and midwives in physiological birth should intensify in order to contribute to the humanization of care and to promote the realization of natural birth, using technology appropriately. And it is with the true understanding of the physiology of childbirth that procedures began to be questioned, initiating a difficult movement of change in practices worldwide, leading to studies that provide evidence of the effectiveness of these procedures, which culminated in systematic reviews and, finally, in evidence-based medicine, today evidence-based health, becoming recommendations by the World Health Organization (WHO) and published in Brazil in 1996, entitled *Safe Motherhood – Care for a normal birth: a practical guide*, with the establishment of a definition of normal birth[5].

The Safe Motherhood strategy also identifies the most common practices used in labor and establishes good practice standards for uncomplicated labor conduct, based on the best available evidence and classified into four categories recommended by the WHO: Demonstrably useful practices that should be encouraged; Practices that are clearly harmful or ineffective and must be eliminated; Practices for which there is insufficient evidence to support a clear recommendation and which should be used with caution until further research clarifies the issue; Practices often misused[6].

These categories emerge so that care for labor and delivery is appropriate to good care practices, promoting a proper and safe parturition process that meets the needs of each woman. It is in this scenario of providing safe care based on good practices that the obstetric nurse has been increasingly inserted, seeking to reduce the rates of obstetric violence, unnecessary interventions, cesarean sections without real indications and maternal and perinatal morbidity and mortality[7].

METHODOLOGY

This is an observational, descriptive and retrospective study. The research was conducted in the city of Maceió-Alagoas at the Santa Monica School Maternity (*Maternidade Escola Santa Mônica*, MESM) belonging to the Hospital Complex of the State University of Health Sciences of Alagoas. It is specialized in Medium and High Complexity Care, being a State Reference in the Care of High-Risk Pregnant Women, by Ministerial Ordinance MS/SAS No. 89 of March 19th, 1999. It is part of the State Network of Urgencies and Emergencies, in the Specialized Hospital Care for Obstetric Urgencies and in the Denilma Bulhões Maternal House which specializes in low and medium complexity care (outpatient), being a municipal reference in the care of low-risk pregnant women.

The inclusion criteria were the clinical records of the parturients assisted by nurses specialized in obstetric nursing or who had an obstetrician diploma. The medical records were excluded of women who were in labor and at-risk

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pregnancy, dystocia during labor and childbirth, also of those who, on admission, had a diagnosis of intrauterine fetal death, and labor resolution by caesarean section.

The variables analyzed were the following: obstetric (parity, gestational age, number of prenatal consultations, use of partograph, maternal position, occurrence of episiotomy, evaluation of the birth canal, clinical or obstetric complications occurring at delivery and puerperium), neonatal (Apgar score, fate of the newborn) and maternal demographics (age, schooling).

The sample size was estimated at 138 records, 51 from the Santa Monica School Maternity and 87 at the Denilma Bulhões Maternal House, considering a proportion of humanized actions performed in the population of 50% (safer estimate when there is little information on the studied population), an absolute accuracy of 8%, and a significance level of 5%.

Data was collected in 2008 by means of the medical records, with the partograph and the declaration of live births attached to it. Systematic random probability sampling was used based on the birth record book of the institutions, the total of nurse-assisted deliveries being verified in the above stipulated period. After selecting the medical records consulted, the appropriate numbering was placed in ascending order and the draw was made observing the inclusion and exclusion criteria and considering the proportional sample number for each institution. The information regarding the factors of interest was recorded in a form prepared specifically for the study.

Data was collected in a standardized form and stored in a *Microsoft Excel*® 2007 electronic spreadsheet, so each row corresponded to one data collection form and each column to the collected data. Descriptive analysis was performed by calculating the 95% confidence interval for each estimated point.

The variables were grouped into categories and described as percentages and as categorical variables: The statistical analysis of the data was performed by absolute and relative frequency, using the Chi-square test, or the *Fisher*'s exact test (F) when necessary. For the tests, a significance level of 5% was considered. Thus, differences between the groups were observed when the p-value was below 0.05 (p-value<0.05).

The research followed the recommendation in Resolution No. 466/12 of the National Health Council of the Ministry of Health, and was submitted to the Ethics Committee of the institution, approved by opinion No. 1,074/09.

RESULTS

It was possible to verify that the percentage of distribution of the variables of interest was similar between the two evaluated institutions. From the results below, it was observed that there was no statistically significant difference between institutions (p<0.05) regarding age or education, as shown in Table 1.

TABLE 1: Distribution of the studied samples from two maternities, according to the demographic variables. Maceió - AL, 2008.

Variables		Maternities				*p-value(***)*
		M1(*)		*M2(**)*		
		n	*%*	*n*	*%*	
Age	Less than 20 years old	10	20.4	15	17.6	**0.234**
	From 20 to 25 years old	11	22.4	31	36.5	
	From 26 to 30 years old	14	28.6	25	29.4	
	Above 30 years old	14	28.6	14	16.5	
Schooling	None	8	17.0	9	12.9	**0.067**
	Incomplete Elementary School	22	46.8	31	44.3	
	Complete Elementary School	3	6.4	19	27.1	
	Incomplete High School	9	19.1	8	11.4	
	Complete High School	4	8.5	3	4.3	
	Incomplete or complete Higher Education	1	2.1	0	0.0	

Source: The Author, 2019. (*) M1- Santa Monica School Maternity, (**) M2- Denilma Bulhões Maternal House, (***) p<0.05

Regarding the maternal variables, it was observed that there was a statistically significant difference between the institutions (p<0.05) regarding parity, gestational age, maternal position, oxytocin use and complications, showing that there was a higher percentage of primiparous women among the patients of the Santa Monica School Maternity than in Denilma Bulhões; there was a higher percentage of patients with a gestational age between 37 and 42 weeks among

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Denilma Bulhões patients than in the Santa Monica School Maternity; there was a higher percentage of patients with a maternal lying position among those of the Santa Monica School Maternity than in Denilma Bulhões; there was a higher percentage of patients with episiotomy among those of the Santa Monica School Maternity than in Denilma Bulhões, as shown in Table 2.

TABLE 2: Distribution of the studied samples from two maternities, according to the obstetric and perinatal variables. Maceió. AL, 2008.

Variables		Maternities				p-value(***)
		M1(*)		M2(**)		
		n	%	n	%	
Parity	Primiparous	20	55.6	17	30.4	0.019
	Secundiparous	13	36.1	23	41.1	
	Multiparous	3	8.3	16	28.6	
Gestational age	From 28 to 30 weeks	1	2.0	0	0.0	0.003
	From 30 to 36 weeks	10	19.6	3	3.4	
	From 37 to 42 weeks	40	78.4	84	96.6	
Prenatal consultations	None	2	4.5	5	6.3	0.692
	From 1 to 3	10	22.7	15	18.8	
	From 3 to 4	2	4.5	8	10.0	
	5 or more	30	68.2	52	65.0	
Partograph use	Not filled	3	10.3	10	11.8	0.479
	Incomplete	16	55.2	36	42.4	
	Complete	10	34.5	39	45.9	
Birthplace	Screening	2	3.9	2	2.3	0.634
	Pre-labor	1	2.0	4	4.6	
	Delivery room	48	94.1	81	93.1	
Maternal position during childbirth	Lying down	19	50.0	1	1.1	0.001
	Semi-seated	19	50.0	85	97.7	
	Seated	0	0.0	1	1.1	
Episiotomy	Yes	20	40.0	13	14.9	0.001
	No	30	60.0	74	85.1	
Verification of uterine contractility and	Yes	44	100.0	87	100.0	***
routine examination of the placenta and ovular membranes	Yes	49	100.0	87	100.0	***
Assessment of the birth canal	Yes	9	17.6	1	1.1	0.001
Clinical or obstetric complications	No	42	82.4	86	98.9	
Apgar score at first minute	1-3	1	2.0	0	0.0	0.234
	4-5	1	2.0	4	4.7	
	6-8	20	40.0	24	28.2	
	9-10	28	56.0	57	67.1	
Apgar score at fifth minute	6-8	4	7.8	4	4.7	0.473
	9-10	47	92.2	81	95.3	

Source: The Author, 2019. (*) M1- Santa Monica School Maternity, (**) M2- Denilma Bulhões Maternal House, (***) p<0.05

DISCUSSION

The Brazilian maternal and perinatal outcomes over the past 23 years have been steadily improving; however, mortality and morbidity are still unacceptably high. Because of this, the reduction in maternal mortality has been included in the list of Millennium Development Goals defined by the United Nations (UN). The purpose was to reduce the maternal mortality ratio by 75% by 2015; however, global estimates of the decline in maternal mortality show that the results achieved were not sufficient to reach the goal in most countries[8,9].

Despite the reduction of these rates, the practice in most institutions is still resistant to the implementation of good obstetric practices, because it is necessary to focus on childbirth care centered on the parturient. Since always, in the approach to childbirth and maternal and perinatal complications, women have not been the subjects of attention:

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this role, of the subject, has been occupied by the professionals, the institutions and their interests. Factors that justify the massive introduction of inappropriate technologies in childbirth care are identified, making these procedures and practices lead to numerous unnecessary interventions[9].

In contrast, the humanist model favors the well-being of the parturient and her baby, seeking to be as less invasive as possible. It makes an appropriate use of technology, and assistance is characterized by the continuous monitoring of the parturition process. In this conception, in addition to hospitals, childbirth can occur either in delivery centers or in outpatient clinics, and hospitals are reserved for cases in which complications are provenly expected, in order to reduce the transfer time from the normal to the surgical sector.

The international evaluation of care models shows that countries that maintained the model of childbirth care, valuing the performance of midwives (*or nurse-midwives*), such as Scandinavian countries, England, Japan, The Netherlands, France, Germany and others, have managed to keep their maternal and fetal/neonatal morbidity and mortality indicators low, as well as the rate of interventions such as cesarean sections, episiotomies, etc[10]. According to the analysis of the variables of assistance to labor and delivery: among the useful behaviors recommended by the Ministry of Health, the partograph is included in category A, demonstrably useful practices that should be encouraged.

The partograph is the graphic representation of labor; its use allows to monitor the evolution and to document labor and diagnose its changes, indicating the adoption of appropriate conducts to correct deviations, avoiding unnecessary interventions[11].

Of the 73.2% of the completed partographs presented in this study, only 35.5% (49/138) were complete, demonstrating that there is still resistance from the professionals who perform labor assistance to use the partograph as a follow-up instrument which improves childbirth care allowing to identify dystocia and intervening logically and effectively. In the two institutions studied, the parturient is assisted by obstetricians and nurses at some point in the evolution of labor; therefore, they are filled in by these professionals and it is not possible to quantify the participation of nurses in this underreporting.

A study carried out in a teaching hospital in Pernambuco showed that the filling of the partograph occurred in only 40.6% of the births. Thus, filling the partograph as a good obstetric practice, as recommended by the WHO, should be a practice in the care of labor by professionals, as its use allows for unnecessary interventions to be performed[12].

The partograph, for being used as a criterion to indicate the conducts during labor, in this study, the relationship of its completion with other conducts useful in the care of labor was also evaluated. In 93.5% of the parturients, the delivery occurred in the delivery room, there was a statistically significant difference ($p<0.001$) in relation to the place of delivery, showing a higher percentage of patients with place of delivery in the delivery room between the groups, with the use of complete and incomplete partograph than in the group of unfilled utilization, being observed in both institutions. The identification of this occurs due to the absence of PPP rooms in the two institutions, and the monitoring of labor through the registration of the partograph enables the timely transfer of women from the pre-delivery room to the delivery room, a practice classified as category D.

The humanization of childbirth contemplates the creation of the delivery rooms where the parturients remain during labor (cervical dilatation phase), childbirth (fetal expulsion and placental discharge) and immediate puerperium with their companion. This strategy has been shown to be effective in humanizing childbirth, encouraging normal delivery, seeking comprehensive obstetric care with the participation of teamwork, with a consequent reduction in cesarean rates[13].

Regarding the position of delivery variable, considering the values by institution, the Denilma Bulhões Maternal House presented 97.7% in semi-seated position and 1.1% in lithotomy, compared to 37.3% in the same position in the MESM, an equal distribution to the lying down position, also with 37.3%. There was a statistically significant difference between the two institutions ($p<0.05$), with a higher percentage of parturients with a lying maternal position among those of the ESM than in the Denilma Bulhões. This is probably due to its distinctive characteristics, since the Maternal House has the nurses on its team more focused on natural childbirth, where women have greater freedom of movement and choice. In the MESM, since it is a high-risk reference center, nurses have repeated the practices of obstetricians in their care, without exercising their autonomy or the right of the parturient.

Encouraging freedom of position and movement during labor are demonstrably useful practices that should be encouraged. Thus, the WHO recommends that women adopt the position of their choice, as long as they avoid long periods in the supine position. The professionals should encourage the upright position that causes less discomfort and

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difficulty in pulling, less pain during labor, and less vaginal or perineal trauma in the expulsive period, but should respect the woman's position of choice[5].

Among the interventions incorporated into women's health care during childbirth is episiotomy. The liberal or routine use of episiotomy has been classified as a practice, often used inappropriately, and should only be done when needed, as indicated by the WHO in about 10% to 15% of the cases. Although episiotomy is a technique frequently performed, its incidence varies. A systematic review of the Cochrane Library on the practice and effects of episiotomy, comparing routine use with restricted use, found the following results: episiotomy was routinely applied in 72.7% and, when restricted use, in 27.6% of the women evaluated (2,209 in the first group and 2,441 in the second) and; the restricted use episiotomy was associated with a lower risk of posterior perineum trauma, need for suturing and healing complications[14].

A study conducted in a maternity hospital in the inland of São Paulo, showed that episiotomy is still performed in 17.6% of the patients, showing that there has not yet been a change in the practices of the professionals, both nurses and physicians, since they believe that episiotomy protects the perineum against other morbidities[15].

Regarding the verification of uterine contractility and the routine examination of the placenta and ovular membranes, they occurred in 94.9% of the sample studied, leaving 5.1% with no record on this item. Examination of the placenta, umbilical cord and membranes immediately after expulsion is an indispensable practice, especially to verify integrity, to make sure that no placental or membrane remains have been left in the uterine cavity and it is a practice recommended by the WHO and by the MoH[5,6].

Regarding the review of the birth canal, after discharge it is sought to find lacerations of the path (vagina, cervix) and of the perineum. The review of the uterine cavity may be necessary if possible retention of placental debris or membranes is suspected or if there is increased bleeding. In the present study it was observed that, in 98.6% of the births, the nurse made the evaluation of the birth canal, leaving only 1.4% with no record of performing this activity or not. Absence of registration occurred specifically in the MESM, the Denilma Bulhões Maternal House having 100% of the performance of the birth canal evaluation recorded.

The analysis of the neonatal variables showed the result of the Apgar score found in the Denilma Bulhões Maternal House, an Apgar score between 8 and 10 with 67.1% in the first minute followed by 95.3% in the fifth minute, and the MESM with 56% followed by 92.2%, respectively. In a study conducted in the inland of the state of Ceará[16], the Apgar scores were correlated with the obstetric variables, where newborns had Apgar scores between 8 and 10 in mothers aged 20-29 years old, who had full-term pregnancies between 37-41 weeks and those who had more than seven prenatal consultations, showing that the more comprehensive care is provided since pregnancy, childbirth and puerperium, the more the rates of maternal and perinatal complications decrease.

CONCLUSION

The actions performed by the nurses in assisting labor and delivery in this study are within the context of a real change in paradigm and attitude towards scientific evidence. Assuming their supportive but extremely important role in the parturition process to promote safe care and where women are the protagonists of this moment. Making all the phases be experienced with a scientific base, thus reducing unnecessary interventions during labor and delivery. It is important to emphasize that the obstetric nurses is at the forefront in the struggle for the humanization of childbirth care, where they guide and educate women to know the physiology of their own body and to choose the type of delivery they want, free of unnecessary interventions, demonstrating its influence in the education of these women.

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