Association between Type of Delivery and Newborn Apgar Score Results

Mohammed Baqer Hassan

University of Kufa / College of Nursing /Department of Pediatric Nursing

Abstract- Across-sectional descriptive study is carried out at AL-Najaf AL-Ashraf City, from March 20th   to June 6th 2016.to find out association between type of delivery and newborn Apgar score results. The objective of the study areto:Identify the newborn Apgar score results according to type of delivery at Al-Zahraa Teaching hospital, To find out association between type of delivery and newborn Apgar score results, and to find out association between newborn Apgar score results according to type of delivery and their general information.The number of samples about (101) infants, (54male and 47female), the hospital selected for the collection of this samples is AL-Zahraa Teaching Hospital in AL-Najaf AL-Ashraf City.The data are collected through the use of development questionnaire, which consists of five parts: first part is sociodemographic data that consist of 12 items, second part is neonatal part that consist of 4 items, third part is Resuscitation after birth that consist of 6 items, forth part is Medication Administration Resuscitation that consist of 5 items and fifth part is Apgar score that consist of 5 items.Reliability of the questionnaire is determined through a pilot study and the validity through a panel of (8) experts. The data were described statistically and analyzed through the use of statistical package of social sciences (SPSS). Results: the findings of the study indicate that there is highly significant relationship between the Apgar score and resuscitation after birth . while there is a non significant relationship between the Apgar score anddemographical characteristics variable that includes(delivery type, mother's age, family income, residence, medical history and child gender). The results show significant correlation between the Apgar score and the gestational age.The present study concluded that the Apgar score in the first, fifth and tenth minute in the normal delivery is better than caesarean section.The study recommended to Encourage the pregnancies women on the normal delivery, Encourage the nurses on commitment in apply Apgar score for newborns, Encourage to apply the Apgar score of women that have gestational age lower than normal and It is necessary to apply resuscitation after birth.

I. Introduction

Newborn infants should assess immediately after delivery. The Apgar score , introduced in 1952 by Dr. Virginia Apgar, is used to evaluated newborns at 1 minute and 5 minutes after birth. An additional Apgar assessment is done at 10 minutes if the 5-minute score is less than 7 points. Assessment of the newborn at 1 minute provides data about the newborn's initial adaptation to extra uterine life, Assessment at 5 minutes provides a clearer indication of the newborn's overall central nervous system status. Five parameters are assessed with Apgar scoring.

A quick way to remember the parameters of Apgar scoring is as follows appearance, pulse, reflex irritability, activity and respiratory [1].

Each parameter is assigned a score ranging from0 to 2 points. A score of 0 points indicates an absent or poor response; a score of 2 points indicates a normal response. A normal newborn's score should be 8 to 10 points. The higher the score, the better the condition of the newborn. If the Apgar score is 8 points or higher, no intervention is needed other than supporting normal respiratory efforts and maintaining thermoregulation. Scores of 4 to 7 points signify moderate difficulty and scores of 0 to 3 points represent severe distress in adjusting to extra uterine life. The Apgar score is influenced by the presence of infection, congenital anomalies, physiologic immaturity, maternal sedation via medications, and neuromuscular disorders [1].

When the newborn experiences physiology depression, the Apgar score characteristic disappear in predictable manner: first the pink coloration is lost, next the respiratory effort, and then the tone, followed by reflex irritability and finally heart rate .Parents are eager to know their newborn's length and weight. These measurements are taken soon after birth. A disposable tape measure or a built-in measurement board located on the side of the scale can be used. Length is measured from the head of the newborn to the heel with the newborn after unclothed. Because of the flexed position and extend the leg completely when measuring the length. The expected length of a full-term newborn is usually 48 to 53 cm ,Molding can affect measurement [2].

The most frequently used method to assess the newborn's immediate adjustment to extra uterine life is the Apgar scoring system .The score is based on observation of heart rate, respiratory effort, muscle tone, reflex irritability, and color. Each item is given a score of 0, 1, or 2. Evaluations of all five categories are made 1 and 5 minutes after birth and are repeated every 5 minutes until the infant's condition stabilizes. Total scores of 0 to 3 represent severe distress, score of 4 to 6 signify moderate difficulty in adjusting to extra uterine life. Many healthy newborns do not achieve a score of 10 because the body is not completely pink. Resuscitative measures may also affect the infant's Apgar score, therefore an expanded Apgar score reflecting resuscitation measures such as endotracheal intubation, supplement oxygen administration, and chest compressions is suggested to accurately reflect the infant's condition [3].

Vaginal delivery causes lung clearance from secretions and fluids with pressure on neonate chest. This phenomena help to neonate for better respiration. Cesarean section is an alternative method of delivery in conditions that threatened fetal and maternal life [4].

But today, some mothers select cesarean section for fear of vaginal delivery pain and offspring protection. Drugs used for anesthesia during cesarean section can decrease uterine and placental circulation then it causes fetal hypoxemia [5]. Infants of women with one previous cesarean section were at increased risk of low Apgar score compared with infants of women with one previous vaginal delivery[6].

1.2. importance of the study

Near 66.3% of infants born by normal delivery during 2015 in Al-najaf city (Al-Zahraa Teaching hospital).

And about 33.7% of infants born by caesarean section during 2015 in Al-najaf city (Al-Zahraa Teaching hospital).

Near (1157) infants born by normal delivery and about (951) infants born by caesarean section during 2015 in diyala.

1.3. Statement of Problem

Association Between Type of Delivery and Newborn Apgar Score Results at AI-Zahraa Teaching hospital.

1.4. Objectives

1- To identify the newborn Apgar score results according to type of delivery at Al-Zahraa Teaching hospital.

2- To find out association between type of delivery and newborn Apgar score results.

3- To find out association between newborn Apgar score results according to type of delivery and their general information.

II. METHODOLOGY

This chapter presents the methods of the study through the following:

2.1. Study Design

A purposive study designed to find the Association between Type of Delivery and Newborn Apgar score Results at Al-Zahraa Teaching Hospital. The study was carried out the period from March 20th to June 6th 2016.

2.2. Administrative Arrangements:

An official permission is obtained from the Ministry Higher Education and Scientific Research. Another approval is issued from the Ministry of Health /Initial agreement of Al-Zahraa Teaching Hospital in Al-Najaf Al-Ashraf governorate in order to collect the required specimen and interviewing each subject.

2.3. The setting of study:

The study was carried out in Al-Zahraa Teaching Hospital in Al-najaf Al-Ashraf governorate.

2.4. Study Sample:

Collected sample of (100) Association between Type of Delivery and Newborn Apgar score Results.

2.5. Data collection:

The collection of the data was utilized of the developed questionnaire and by means of structured assessing technique with the subjects who was individually assessing in delivery room unit and operational room by using of English version of the questionnaire and they was assessing in a similarway, by the same questionnaire for all those subjects who was included in study sample.

2.6. The study instrument:

A question was developed and modified by researchers for the present study to measure the Association between Type of Delivery and Newborn Apgar score Results.

The questionnaire consisted of five major parts: Part One: Sociodemographic Data: A sociodemographic data part consisted of (12) items. Which include mother's data, mother's age, number of previous births, gestational age, residence, related disease mother, medical history, diabetes, hypertension, other disease, family income and delivery type. **Part Two: Neonatal Data** The second part is A questionnaire consisted of (4) items. Which include gender, age, weight at birth and length at birth. **Part Three: Resuscitation after birth:** The third part of the questionnaire is comprised of (6) items. Which include none, tracheal suction, oxygen, mask/balloon ventilation, intubation and thorax compressions. **Partfour:Medication Administration Resuscitation** The fourth part of the questionnaire is comprised of (5) items. Which include none, adrenaline, glucose and other medication. **Part Five: Apgar Score** The fifth part of the questionnaire is comprised of (5) items. Which include color, heart rate, reflex irritability, muscle tone and respiration.

3.7. Validity of the study:

To investigate the clarity, relevancy, and adequacy of the questionnaire in order to achieve the present study's objectives, content, validity for the early developed instrument was determined through the use of panel experts (which they have more than 5 years of experience in the job field).

A preliminary copy of questionnaire was designed and presented to (8) experts. They were all in nursing college /University of Al-Kufa. All them were asked to review the questionnaire. Results indicated that the majority of experts had agreed that questionnaire was appropriately designed and developed to measure the phenomena underlying the study.

In addition to the experts' responses, their suggestions were taken into consideration. So far, modifications are employed and the final copy of the constructed instrument is completed to be a fitting tool for conducting the study.

2.8. Statically Data Analysis:

Data are analyzed through the use of statistical package of social sciences (SPSS).The statistical procedures .which are applied for the data analysis and assessment of the results included the following:

Descriptive statistics Frequencies (F). Percentages (%).

$$\% = Frequencies\ /\ sample\ size\ x\ 100$$

Inferential Statistics:
- Correlation.
- Chi-square.

The formula for contingency coefficient is:

$$CC = \sqrt{X^2 / (X^2 + n)}$$

III.   RESULTS

Table (1): Observed Frequencies and Percentages for Demographical Characteristics.

Category		Frequency	Percentage %
Mother Age Group(years)	<= 25	**44**	**43.6**
	26 - 35	43	42.6
	36 Up	14	13.9
Gestational age(weeks)	<= 36	9	8.9
	37 Up	**92**	**91.1**
Delivery type	**normal**	**53**	**52.5**
	caesarean	48	47.5
child gender	**Male**	**54**	**53.5**
	female	47	46.5
Residence	**urban**	**73**	**72.3**
	Rural	28	27.7
family income	sufficient	38	37.6
	sufficient to some extent	**55**	**54.5**
	insufficient	8	7.9
Medical history	Diabetes	4	4.0
	Hypertension	8	7.9
	Other disease	2	2.0
	None	**87**	**86.1**
Resuscitation after Birth	None	43	42.6
	Tracheal suction	**47**	**46.5**
	Oxygen	11	10.9
number of previous birth	0	20	19.8
	1	23	22.8
	2	**25**	**24.8**
	3	16	15.8
	4	9	8.9
	5	2	2.0
	6	2	2.0
	8	2	2.0
	9	2	2.0
Total		101	100%

This table shows that most of the study sample (43.6%) Mother Age Group are leass than<= 25years old, (91.1%) are Gestational age 37 Up weeks, (52.5%) are normal delivery, (53.5%) are male, (72.3%) of the study sample are urban, (54.5%) of the study sample sufficient to some extent socio-economic status , (86.1%) of the study sample none Medical history,(46.5%) of the study sample Resuscitation after Birth Tracheal suction, and(24.8%) of the study sample number of previous birth.

Table (2): Observed Frequencies and Percentages for Apgar score.

Category		Frequency	Percentage %
Apgar score result in 1 minute	Greatly low	2	2.0
	Relatively low	26	25.7
	Normal	**73**	**72.3**
Apgar score result in 5 minute	Greatly low	0	0
	Relatively low	7	6.9
	Normal	**94**	**93.1**
Apgar score result in 10 minute	Greatly low	0	0
	Relatively low	0	0
	Normal	**101**	**100**
Total		101	100%

This table shows that most of the study sample(72.3%) of Apgar score result in 1 minute are normal, (93.1%) of Apgar score result in 5 minute are normal, and (100%) of the study sample of Apgar score result in 10 minute are normal.

Table (3): causes relationship between Delivery type and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	P-value
			Greatly low	Relatively low	Normal		
Delivery type	normal	Count	0	13	40	53	$X^2=2.430$ P-value=0.297 Non-sig
		%	0.0%	24.5%	75.5%	100.0%	
	caesarean	Count	2	13	33	48	
		%	4.2%	27.1%	68.8%	100.0%	
Total		Count	2	26	73	101	
		%	2.0%	25.7%	72.3%	100.0%	

This table show no significant correlation between Delivery type and Apgar score result in 1 minute at p-value (0.2970).

Table (4): causes relationship between Delivery type and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	P-value
			Relatively low	Normal		
Delivery type	normal	Count	3	50	53	$X^2=0.279$ P-value=0.597 Non-sig
		%	5.7%	94.3%	100.0%	
	caesarean	Count	4	44	48	
		%	8.3%	91.7%	100.0%	
Total		Count	7	94	101	
		%	6.9%	93.1%	100.0%	

This table show no significant correlation between Delivery type and Apgar score result in 5 minute at p-value (0.597).

Table (5): causes relationship between Mother's age (years) and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	Relatively low	Normal		
Mother's age (years)	<= 25	Count	1	14	29	44	$X^2=1.883$ P-value=0.757 Non-sig
		%	2.3%	31.8%	65.9%	100.0%	
	26 - 35	Count	1	9	33	43	

			2.3%	20.9%	76.7%	100.0%	
	36 Up	Count	0	3	11	14	
		%	0.0%	21.4%	78.6%	100.0%	
Total		Count	2	26	73	101	
		%	2.0%	25.7%	72.3%	100.0%	

This table show no significant correlation between Mother's age (years) and Apgar score result in 1 minute at p-value (0.757).

Table (6): causes relationship between Mother's age (years) and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	Normal		
Mother's age (years)	<= 25	Count	4	40	44	$X^2=1.361$ P-value=0.506 Non-sig
		%	9.1%	90.9%	100.0%	
	26 - 35	Count	3	40	43	
		%	7.0%	93.0%	100.0%	
	36 Up	Count	0	14	14	
		%	0.0%	100.0%	100.0%	
Total		Count	7	94	101	
		%	6.9%	93.1%	100.0%	

This table show no significant correlation betweenMother's age (years) and Apgar score result in 5 minute at p-value (0.506).

Table (7): causes relationship between Gestational age (years) and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	Relatively low	Normal		
Gestational age (years)	<= 36	Count	0	5	4	9	$X^2=4.666$ P-value=0.097 Non-sig
		%	0.0%	55.6%	44.4%	100.0%	
	37 Up	Count	2	21	69	92	
		%	2.2%	22.8%	75.0%	100.0%	
Total		Count	2	26	73	101	
		%	2.0%	25.7%	72.3%	100.0%	

This table show no significant correlation between Gestational age (years) and Apgar score result in 1 minute at p-value (0.097).

Table (8): causes relationship between Gestational age (years) and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	Normal		
Gestational age (years)	<= 36	Count	0	9	9	$X^2=0.736$ P-value=0.391 Non-sig
		%	0.0%	100.0%	100.0%	
	37 Up	Count	7	85	92	
		%	7.6%	92.4%	100.0%	
Total		Count	7	94	101	
		%	6.9%	93.1%	100.0%	

This table show no significant correlation between Gestational age (years) and Apgar score result in 5 minute at p-value (0.391).

Table (9): causes relationship between residence and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	Relatively low	Normal		
residence	urban	Count	2	18	53	73	$X^2=0.891$ P-value=0.640 Non-sig
		%	2.7%	24.7%	72.6%	100.0%	
	rural	Count	0	8	20	28	
		%	0.0%	28.6%	71.4%	100.0%	
Total		Count	2	26	73	101	
		%	2.0%	25.7%	72.3%	100.0%	

This table show no significant correlation between residence and Apgar score result in 1 minute at p-value (0.640).

Table (10): causes relationship between residence and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	Normal		
residence	Urban	Count	6	67	73	$X^2=0.687$ P-value=0.410 Non-sig
		%	8.2%	91.8%	100.0%	
	Rural	Count	1	27	28	
		%	3.6%	96.4%	100.0%	
Total		Count	7	94	101	
		%	6.9%	93.1%	100.0%	

This table show no significant correlation between residence and Apgar score result in 5 minute at p-value (0.410).

Table (11): causes relationship between Medical history and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	Relatively low	Normal		
Medical history	Diabetes	Count	0	0	4	4	$X^2=3.068$ P-value=0.800 Non-sig
		%	0.0%	0.0%	100.0%	100.0%	
	Hypertension	Count	0	3	5	8	
		%	0.0%	37.5%	62.5%	100.0%	
	Other disease	Count	0	0	2	2	
		%	0.0%	0.0%	100.0%	100.0%	
	None	Count	2	23	62	87	
		%	2.3%	26.4%	71.3%	100.0%	
Total		Count	2	26	73	101	
		%	2.0%	25.7%	72.3%	100.0%	

This table show no significant correlation betweenMedical history and Apgar score result in 1 minute at p-value (0.800).

Table (12): causes relationship between Medical history and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	Normal		
Medical history	Diabetes	Count	0	4	4	$X^2=1.210$ P-value=0.571 Non-sig
		%	0.0%	100.0%	100.0%	
	Hypertension	Count	0	8	8	
		%	0.0%	100.0%	100.0%	
	Other disease	Count	0	2	2	
		%	0.0%	100.0%	100.0%	

None	Count	*7*	*80*	*87*	
	%	*8.0%*	*92.0%*	*100.0%*	
Total	Count	*7*	*94*	*101*	
	%	*6.9%*	*93.1%*	*100.0%*	

This table show no significant correlation between Medical history and Apgar score result in 5 minute at p-value (0.571).

Table (13): causes relationship between family income and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	**Relatively low**	**Normal**		
family income	**Sufficient**	Count	*1*	*8*	*29*	*38*	*X²=1.257* *P-value=0.869* *Non-sig*
		%	*2.6%*	*21.1%*	*76.3%*	*100.0%*	
	sufficient to some extent	Count	*1*	*15*	*39*	*55*	
		%	*1.8%*	*27.3%*	*70.9%*	*100.0%*	
	Insufficient	Count	*0*	*3*	*5*	*8*	
		%	*0.0%*	*37.5%*	*62.5%*	*100.0%*	
Total		Count	*2*	*26*	*73*	*101*	
		%	*2.0%*	*25.7%*	*72.3%*	*100.0%*	

This table show no significant correlation betweenfamily income and Apgar score result in 1 minute at p-value (0.869).

Table (14): causes relationship between family income and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	**Normal**		
family income	**Sufficient**	Count	*3*	*35*	*38*	*X²=0.625* *P-value=0.732* *Non-sig*
		%	*7.9%*	*92.1%*	*100.0%*	
	sufficient to some extent	Count	*3*	*52*	*55*	
		%	*5.5%*	*94.5%*	*100.0%*	
	Insufficient	Count	*1*	*7*	*8*	
		%	*12.5%*	*87.5%*	*100.0%*	
Total		Count	*7*	*94*	*101*	
		%	*6.9%*	*93.1%*	*100.0%*	

This table show no significant correlation between family income and Apgar score result in 5 minute at p-value (0.732).

Table (15): causes relationship between child gender and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	**Relatively low**	**Normal**		
child gender	**male**	Count	*1*	*18*	*35*	*54*	*X²=3.501* *P-value=0.174* *Non-sig*
		%	*1.9%*	*33.3%*	*64.8%*	*100.0%*	
	female	Count	*1*	*8*	*38*	*47*	
		%	*2.1%*	*17.0%*	*80.9%*	*100.0%*	
Total		Count	*2*	*26*	*73*	*101*	
		%	*2.0%*	*25.7%*	*72.3%*	*100.0%*	

This table show no significant correlation between child gender and Apgar score result in 1 minute at p-value (0.174).

Table (16): causes relationship between child gender and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	Normal		
child gender	male	Count	4	50	54	X^2=0.041 P-value=0.840 Non-sig
		%	7.4%	92.6%	100.0%	
	female	Count	3	44	47	
		%	6.4%	93.6%	100.0%	
Total		Count	7	94	101	
		%	6.9%	93.1%	100.0%	

This table show no significant correlation between child gender and Apgar score result in 5 minute at p-value (0.840).

Table (17): causes relationship between Resuscitation after Birth and Apgar score result in 1 minute

			Apgar score result in 1 minute			Total	
			Greatly low	Relatively low	Normal		
Resuscitation after Birth	None	Count	0	6	37	43	X^2=18.291 P-value=0.001 High sig.
		%	0.0%	14.0%	86.0%	100.0%	
	Tracheal suction	Count	2	12	33	47	
		%	4.3%	25.5%	70.2%	100.0%	
	Oxygen	Count	0	8	3	11	
		%	0.0%	72.7%	27.3%	100.0%	
Total		Count	2	26	73	101	
		%	2.0%	25.7%	72.3%	100.0%	

This table show high significant correlation between Resuscitation after Birth and Apgar score result in 1 minute at p-value (0.001).

Table (18): causes relationship between Resuscitation after Birth and Apgar score result in 5 minute

			Apgar score result in 5 minute		Total	
			Relatively low	Normal		
Resuscitation after Birth	None	Count	2	41	43	X^2=0.608 P-value=0.738 Non-sig
		%	4.7%	95.3%	100.0%	
	Tracheal suction	Count	4	43	47	
		%	8.5%	91.5%	100.0%	
	Oxygen	Count	1	10	11	
		%	9.1%	90.9%	100.0%	
Total		Count	7	94	101	
		%	6.9%	93.1%	100.0%	

This table show no significant correlation between Resuscitation after Birth and Apgar score result in 5 minute at p-value (0.738).

IV. DISSECTION OF THE STUDY

Part 1: Discursion of the demographic characteristics related to the Association Between Type of Delivery and Newborn Apgar Score Results

Apgar score has been used to evaluate of newborn condition. The low Apgar score indicates the adverse state of newborn. The cesarean section seems affect and reduces the Apgar score during 5 min of life. Our result showed that majority of the mother age are smaller or equal 25 years, gestational age more than 37 weeks, regarding to the gender the findings indicate that gender is male more than female (male 53.5%, female 46.5%), The findings of this study confirm that normal delivery more than caesarean section (normal 52.5%, caesarean 47.5%), and showed the residence in urban more than rural, the majority of medical history for the mother are none, regarding to the family income the findings indicate that sufficient income to some extent is highest percentage, the results show that the percentage of resuscitation after birth is (46.5%) and our result showed the number of previous birth is 2 births is the highest percentage [7]&[8].

Part 2: Discussion of the Frequencies and Percentages for Apgar score.

Throughout the course of the present study, as shown in table (2) which refers to the statistically distribution of observed frequencies, percentage of Apgar score for all the studied sample. The study indicate that the Apgar score in the first, fifth minute

and tenth had normal value but in uneven percentages ((72.3%) of Apgar score result in 1 minute are normal, (93.1%) of Apgar score result in 5 minute are normal, and (100%) of the study sample of Apgar score result in 10 minute are normal). This study Agree with [9].

Part 3: Desiccation of the correlation of all study variables and neonate Apgar score result in 1 minute. The Apgar score is A system used in the assessment of newborn heart rate, respiratory effort, muscle tone, response stimulation and skin color, the Apgar score is assessed (1-10) minutes. our study found in the first minute that no significant correlation between the Apgar score and demographical characteristics variable that includes: delivery type, mother's age, family income, residence, medical history and child gender because all the study result founded normal in tables (3, 5, 9, 11, 13 and 15). in table (7) shows significant correlation between the Apgar score and the gestational age. but the study results confirm that the Apgar score with Resuscitation tracheal suction after Birth had high significant correlation in table (17), the causes of this high significant correlation because the aspiration of fluid from trachea leading to increase relaxation breath that lead to increase oxygen blood supply so that lead the newborn to become healthy and the Apgar score become normal[10] Our study confirm that the delivery mode that not effect on the Apgar score results because not found significant correlation between Apgar score and type of delivery. [11].

Part 4: Desiccation of the correlation of all study variables and neonate Apgar score result in 5 minute. The study results found in the 5 minute that no significant correlation between the Apgar score and demographical characteristics variable that includes: delivery type, mother's age, gestational age, family income, residence, medical history, child gender and Resuscitation after birth because all the study result founded normal in tables (4, 6, 8, 10, 12, 14, 16 and 18) But our study confirm that five-minute Apgar score of normal delivery was a better than Caesarean section (normal delivery 94.3%,caesarean delivery 91.7%) this study Agree with [12].

V. CONCLUSIONS & RECOMMENDATIONS

Conclusions:
According to the present study, the researchers' conclusion the following:
1. The study confirms that the majority of gender are male.
2. The study indicate that the majority of delivery type are normal delivery.
3. The study indicates that the residence in urban areas more than rural areas.
4. The study results indicate that the results have been uneven between the first and fifth minutes and tenth.
5. The study results indicate that the most of newborns are need to tracheal suction.
6. The study results confirm that the Apgar score in the first, fifth and tenth minute in the normal delivery is better than caesarean section.

7. During the results of our study appeared a strong correlation between the gestational age and resuscitation after birth.
8. The study results indicate that the majority of the samples were free of medical history.
9. The study results confirm that the majority of family income are sufficient to some extent.

Recommendations:
Based on the study results and conclusion, the study researchers recommend the following:
1. Encourage the pregnancies women on the normal delivery.
2. Encourage the nurses on commitment in apply Apgar score for newborns.
3. Encourage to apply the Apgar score of women that have gestational age lower than normal.
4. It is necessary to apply resuscitation after birth.

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AUTHORS

First Author – Mohammed Baqer Hassan, University of Kufa / College of Nursing /Department of Pediatric Nursing
Mohammedb.daghil@uokufa.edu.iq