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A Study to Assess the Sucking Reflex of Neonates Born at Selected Hospitals

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Abstract: ***Introduction: A reflex is a movement or action that is performed involuntarily or automatically. Reflexes perform many of our basic body functions. Many of newborn baby's body movements are due to reflexes. Some reflex movements occur spontaneously as part of baby's normal day to day activities, other occur in response to other triggers.[1]Sucking problem is a cause of concern for many new mothers, that makes the mothers worried about their babies. Objectives: To assess the sucking reflex of newborn. Method: A descriptive approach was used in assessing sucking reflex of neonates, 120 samples were selected by probability sampling technique. Demographic Performa & Early feeding skill assessment tool used for data collection. Results: It showed that majority of the neonates 97(80.8%) were having very good sucking reflex, 23 (19.2%) were having fair sucking reflex.***

Keywords: Sucking reflex, Neonate

1. Introduction

The sucking reflex which is present in most full-term babies & some pre-term babies, usually fades by around 3 months of age. The sucking reflex is strongest when the palate is stimulated. Sucking not only provides a source of nourishment it also has calming effect on babies. The urge to suck is stronger in some babies than in others. Many babies, particularly those under 3 months of age, will want to suck for periods of time in addition to when they are feeding.[2]

2. Background

The sucking reflex is probably one of the most important reflexes in newborn, especially when it is paired with the rooting reflex. If we touch the roof of the baby's mouth with finger, a pacifier or a nipple, he will instinctively begin sucking. Around 2 to 3 months of age, baby's sucking will be a result of conscious effort & no longer a reflex. Every time the baby exhibits this reflex, it doesn't necessarily mean that he is hungry. Sucking is soothing enjoyable activity for the baby.[3]

Yawning, sucking a thumb & swallowing amniotic fluid can first be seen in babies at about 12 to 13 weeks of the pregnancy. The sucking & swallowing reflexes do not fully mature until about 36 weeks of the pregnancy. The baby needs to coordinate the reflexes simultaneously to drink milk. This is known as sucking-swallowing-breathing sequence. Sucking can be triggered when a finger, breast, bottle or dummy is placed into the mouth of the baby & pressure is applied to their palate. This stimulates the sucking reflex, which can be quite strong & rapid .[3]

3. Material & Methods

Research Design
In relation to the study descriptive design was selected. Observation of the neonates was done during feeding by using Early Feeding Skill Assessment Scale.

Research Setting
The study was conducted at Gian Sagar Medical College & Hospital and Rajindra Hospital of District Patiala, Punjab. Rajindra hospital is also a multispecialty 1250 bedded government hospital with high patient ratio.

Target population
The target population for a study is the entire set of individuals to be used to make inferences. In this study the target population was of neonates from birth to 48 hours of delivery.

Sample & Sampling Technique
In this study total 120 neonates from birth to 48 hours of life from the Gian Sagar Medical College & Hospital, Rajindra hospital of Distt. Patiala were selected by using probability sampling technique. Firstly the researcher located the sample then checked for the inclusion criteria. After that random allocation of subjects was done by lottery method.

Inclusion criteria
1) Neonates born by Normal Vaginal Delivery.
2) Neonates born with Lower Segment Caesarian Section.
3) Pre-term neonates >34 weeks.
4) Out born neonates who have sucking problems.
5) Neonates born with instrumental delivery

Exclusion criteria
1) Pre-terms <32 weeks of gestation.
2) Meconium aspirated babies.
3) Sick neonate requiring mechanical ventilation.
4) Cleft lip & cleft palate.
5) Trachea-esophageal fistula & Atresia.
6) Diaphragmatic hernia.
7) Neonates who already initiated their feeding.
8) Whose parents do not agree to participate

Selection & development of tool
Tools were selected according to the objectives of the study. Demographic Performa to assess the characteristics of neonates & Early Feeding Skills assessment scale (EFS) was

used to assess the sucking reflex of newborns. Early Feeding Skills assessment scale (EFS) is a standardized tool & the demographic performa was developed after discussion with guide.

Score Interpretation

In the score interpretation part scores were 3, 2, 1. Score 3 was assigned to very good response, score 2 was assigned to fair response, 1 was assigned to poor response. Maximum score was 45 & minimum was 15.

Validity

Early Feeding Skills (EFS) assessment scale is a standardized tool developed by Suzanne Thoyre. The author did the validation of the tool with the help of experts from the scientific publication library the Cochrane reviews.

Reliability

The author of the tool Suzanne Thoyre calculated the reliability with the help of Kappa inter-rater reliability that is >0.80 & the tool was reliable.The reliability of the tool was also tested by the experts of Cochrane library & the author of the tool.

Pilot study

It was conducted on 12 subjects after obtaining permission from the concerned authority of hospital. The subjects were selected by probability random sampling technique.

Data Collection Procedure

A written permission was obtained from the concerned authority prior to the study. 120 samples were selected by researcher by using probability random sampling technique by lottery method. Parents and guardians of the neonates were explained about the purpose of the study & written consent was taken from them, parents information sheet was also provided to them for their knowledge in their respective language. Socio-demographic Performa & Early Feeding Skill assessment scale (EFS) was used by the researcher to assess the sucking reflex. Then the researcher started data collection. Observation was done by using the Early feeding Skill assessment scale.

Ethical consideration

The study was started after the approval of the ethical committee of Gian Sagar Medical College & Hospital, Ram Nagar, Rajpura, District Patiala & concerned authorities of selected hospitals of Distt. Patiala Parents of the subjects were assured about the confidentiality of data collected.

Plan For Data Analysis

The data collected was planned to analyze in terms of objectives of the study by using descriptive statistics.

4. Results

Table 1: Frequency and Percentage distribution of the sample characteristics

S. No.	*Demographic Characteristics*	*Sample*	
		f	*%*
1	**Any Intervention Done At Birth**		
	Yes	1	1
	No	119	99
2	**Apgar Score at 1 & 5 minute**		
	0-3	0	0
	4-6	7	6
	7-10	113	94
3	**Age of the neonate**		
	12 hours	31	25
	24 hours	45	38
	48 hours	44	37
4	**Weight of the baby**		
	Less than 2.5 kg	46	38
	3kg	55	46
	Above 3 kg	19	16
5	**Length of the baby**		
	41-44c.m	110	92
	45-48c.m	10	8
	49-52c.m	0	0
6	**Head circumference**		
	33c.m	118	98
	34c.m	2	2
	35c.m	0	0
7	**Chest circumference**		
	30c.m	116	97
	31c.m	4	3
	32c.m	0	0
	33c.m	0	0
8	**Gender of the baby**		
	Male	77	64
	Female	43	36
9	**Baby born**		
	Pre-term	5	4
	Term	114	95
	Post-term	1	1
10	**Gestational age**		
	Less than 34 weeks	0	0
	34 weeks	2	2
	34-37 weeks	118	98
11	**Mode of the delivery**		
	Normal vaginal delivery	53	44
	Lower segment caesarian section	67	56
	Instrumental delivery	0	0
12	**Place of the delivery**		
	In hospital born	120	100
	At home	0	0
	Out hospital born	0	

Table 1 reveals about the demographic characteristics of the sample, their frequency & percentage distribution. In this table it is shown that the majority of the neonates 119(99%) received no intervention at birth. Maximum of the neonates 113(94%) were having normal apgar score at 1 minute & 5 minutes, only 7(6%) were having fairly low apgar score. About the age, majority of the neonates 45(38%) were having age of the 24 hours, 44(37%) were having 48 hours of age, only 31 (26%) were having 12 hours of age. Regarding the weight of the baby majority of the neonates 55(46%) were having weight of 3 kg, whereas only 19(16%) were having weight above 3 kg. Regarding length, majority of the neonates 110(92%) were having length up to 44 c.m, 10(8%) were having up to 48 c.m. Regarding head circumference, majority of the neonates 118(98%) were

having upto 33 c.m, 2(2%) were having upto 34 c.m. Regarding the chest circumference majority of the neonates 116(97%) were having normal chest circumference, only 4(3%) were having upto 31 c.m. About the gender of the neonates 77(64%) were male & 43(36%) were female. About the birth, 114(95%) were born at term, only 5(4%) were born pre-term. Regarding the gestational age majority of the neonates 117(98%) were having gestational age upto 37 weeks, only 3 (3%) were having gestational age of 34 weeks. About the mode of delivery, maximum 67(56%) neonates were born by lower segment caesarian section, 53(44%) were born by normal vaginal delivery. Regarding the place of the delivery 120(100%) neonates were born in hospital department.

Table 2: Frequency & Percentage Distribution of sucking reflex scores of neonates by Early Feeding Skill Assessment Scale (N=120)

Reflex	Scores	Levels of sucking Neonatal sucking reflex	
		f	%
Very Good	31-45	97	80.8
Fair	16-30	23	19.2
Poor	1-15	0	0

Table 2 depicts the frequency & percentage of sucking reflex scores of neonates by Early Feeding Skill assessment Scale. It shows that majority of the neonates 97(80.8%) were having very good sucking reflex, 23 (19.2%) were having fair sucking reflex.

Table 3: Mean, SD of sucking reflex scores of neonates

Sucking reflex scores	N	Mean	SD
Scores	120	32.30	2.55

Table 3 shows that mean & SD scores of sucking reflex of neonates was 32.30± 2.55 by Early Feeding Skill Assessment Scale.

5. Discussion

Similar studies related to the sucking reflex by **Alberts**[4] et al conducted an observational study & observed that the babies who are born with normal delivery have a good sucking reflex as compared to those who are born with LSCS. This study showed that how the event of birth & birth stimuli contribute to learn to sucking an important step towards the management of early feeding problems. **Tolly**[5] et al conducted a thematic analysis study in which it was concluded that sucking reflex outcomes are poor after LSCS as compared to normal vaginal delivery. 115 mothers were taken as sample & interviews were conducted. Majority of the mothers were facing the same difficulties like pain & positioning, due to this feedings of babies were delayed as a result sucking reflex was poor. **Loke**[6] et al conducted a descriptive correlation study design & a total of 199 women recruited after the delivery & concluded that the 33% mothers after C-section are not ready to feed the baby immediately because of the pain present at suture site & the need of assistance for the positioning.(p=.045**).** 48% were feeling pain at episotomy & were primi. **White-Traut**[7] et al et al conducted a prospective study to assess the feeding problems & feeding progression weekly. Sucking progression was measured by the Medoff – Cooper Nutritive Sucking Apparatus (M-CNSA) which measured the negative sucking pressure generated during oral feedings was poor. **Scheeren**[8] et al conducted a observational study in which the sample consisted on 26 mother/ baby born with LSCS. Data was collected from medical records, & the observation of the babies was conducted during feeding. The finding of the study is that the reason for poor sucking is position of the mother & child, affection & due to the responses of the baby to the feed were very poor. **Vineeta Raghavan**[9] et al conducted a prospective observational cohort study on 400 mothers who delivered term healthy babies (normal, instrumental or caesarean section). Breastfeeding was initiated to 255 out of 400, i.e 64% of babies. Cesarean delivery & male gender were strongest risk factors for a delayed initiation of breastfeeding (95%) & 83% babies were exclusively breastfed & 43% failed to continue breastfeed due to poor sucking reflex.

References

[1] Lau C. Sucking & swallowing disorders in the newborn. Sucking & swallow disorders in the newborn [online] 1996 [2014 Feb 13]; [2 pages]. Available from: URL:http://www.uptodate.com/.../
[2] Nagim MK. Sucking problems & breastfeed. [online]. 2008 [2014 Feb 13]; [5 screens]. Available from: URL:http://www.breastfeeding.about.com/ breastfeeding
[3] Behar TA. Suck problems during breastfeed. [online]. 2008 [2014 Feb 13]; [2 screens]. Available from: URL:http://www.breastfeeding problems.com/suck problem.htm
[4] Alberts JR et al. The experience of being born a natural context for learning to suckle. 2012 Jun;88(6):345-50
[5] Tolly KP et al. Maternal accounts of their breastfeeding infant & early challenges. 2013 Nov;18:224-28
[6] Loke AY, Chan LK. Breastfeeding behavior of the newborns in the practice of exclusive breastfeeding. 2013 Sep;23:10.111
[7] White-TR, Shapiro N, Healy BE. Lack of feeding progression in a pre-term infant. 2012 Jul-Aug;61(4):242-51
[8] Scheeren B, Mengu AP, Devincenzi BS. Early conditions in the breastfeeding of pre-mature newborn infants. 2012 Nov;17(9):1648-57
[9] Vineeta R, Bhavneet B, Praveen K. First hour initiation of breastfeeding & exclusive breastfeeding at six weeks prevalence & predictors in a tertiary care. IJN 2013;73:267-70