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TO ASSESS THE EFFECTIVENESS OF BREASTFEEDING ON PAIN EXPERIENCE OF INFANT DURING INTRAVENOUS THERAPY IN SELECTED HOSPITAL

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ABSTRACT

Background: - Breastfeeding is one of the most effective ways to ensure child health and survival. However, nearly 2 out of 3 infants are not exclusively breastfed for the recommended 6 months rate that has not improved in 2 decades. Breast milk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses. Breast milk provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life. Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life. Women who breastfeed also have a reduced risk of breast and ovarian cancers. Inappropriate marketing of breast-milk substitutes continues to undermine efforts to improve breastfeeding rates and duration worldwide. **Aims: -** The aim of the study was to determine whether breastfeeding made any significant difference in the degree of pain experienced by

infants while undergoing intravenous therapy such as intravenous canula insertion, intravenous medication administration and intravenous fluid administration. **Material and Methods: -** A Pre-experimental one group pre-test-post-test study was conducted to assess the effectiveness of the breastfeeding during intravenous therapy. The study was conducted among 60 patient of NICU ward of SSG hospital in Vadodara. **Results:-** In pretest majority 21 (70%) had pain and 19 (30%) had no pain where as in post test majority 19 (63.3%) had no pain and 11 (36.7%) had pain among infants receiving intra venous therapy. Mean post-test pain score was 3.33±0.844 was reduced from pretest mean pain score was 4.17±1.117 with mean difference of 0.83 and obtained (t value=3.403, df =29, p=0.002) was found statistically highly significant at $p<0.05$ level. demographic variables such as age of child, gender, birth weight, gestational age, Days of admitted in hospital, and educational status of mother were not found any significant association at $p<0.05$ level with post-test level of pain among infants receiving intra venous therapy.

Keywords: Breastfeeding, Intravenous Therapy, Infants

INTRODUCTION

Breastfeeding is one of the most effective ways to ensure child health and survival. However, nearly 2 out of 3 infants are not exclusively breastfed for the recommended 6 months rate that has not improved in 2 decades. Breast milk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses. Breast milk provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life. Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life. Women who breastfeed also have a reduced risk of breast and ovarian cancers. Inappropriate marketing of breast-milk substitutes continues to undermine efforts to improve breastfeeding rates and duration worldwide **[1]**.

The common reason for pain and discomfort in infants is vaccination which is given to almost all children on a regular basis during their childhood **[2]**.

Breastfeeding saves lives and Breast is best are well-known slogans for physicians and women. Putting the newborn to the breast to nurse is now considered normative in the United States with 75% of women doing so. Unfortunately, breastfeeding as a way to continue to feed infants is not yet normative.

Women do not choose to breastfeed as long as recommended by health experts and the government, which may result in a missed opportunity for improving infant health and, at the same time, maternal health. The evidence for this possibility is reviewed here **[3-10]**.

MATERIALS AND METHODS

Research approach is an important element of the research design which governs it and involves the description of the plan to investigate the phenomenon under the study in a structured, unstructured or an integrated approach Quantitative Evaluators approach was adopted to determine effectiveness of breastfeeding on pain experience of infant during intravenous therapy to attain the objective of this study. Research design is a concise notation enabling the efficiency of the researcher and provides the master plan specifying the methods and procedures for collecting and analysing the required information in the research study. In the present study the investigator research Quasi experimental design Pre-test-post-test control group design was used to find out the effectiveness of breastfeeding for pain relief in infants receiving Intravenous therapy. The study will be conducted at SSG hospital of Vadodara. Data will be collected from 60 Neonates/ Infants at SSG Hospital, pretest will be administered to the sample. Breastfeeding technique will be provided during IV therapy, post-test will be conducted during this time.

Section 1: Demographic Variables on characteristics of infant such as age gender birth weight gestational age day of admission in hospital and education status of mother regarding breastfeeding to relieve pain among infants.

Section 2: Include NIPS scale to assess the pain of the neonates / infants

RESULT:

Table 1 depicts the frequency and percentage distribution of socio- demographic variables of infants and mothers. According to age, majority 16(53.3%) were in 4-6 months, 11(36.7%) were in 7-9 months, 2(6.7%) were in 10-12 months and 1(3.3%) were in 1-3 months of age. As per gender of infants, maximum 20(66.7%) were male and 10(33.3%) were male. Regarding birth weight of infants, majority 20(66.6%) were in 10001-2000 gm weight, 8(26.7%) were in 2001-3000 gm weight and 2(6.7%) were in above 3000 gm weight. With regard to gestational age of mother, 15(50%) were in 35-37 weeks of age, 12(40%) were in 31-34 weeks of age, 2(6.7%) were in less than 30 weeks of age and 1(3.3%) were in greater

than 37 weeks of age. According to Days of admitted in hospital, maximum 13(43.4%) were admitted in hospital for 6-10 days, 9(30%) were admitted in hospital 11-15 days, 7(23.3%) were admitted in hospital for 1-5 days and 1(3.3%) were admitted in hospital for more than 15 days. As per educational status of mother, majority 17(56.7%) had primary school, 8(26.7%) had secondary school, 4(13.3%) had higher secondary and 1(3.3%) had graduation and above.

Table 2 depicts the pre-test and post-test level of pain among infants receiving intra venous therapy. Results revealed that in pretest majority 21(70%) had pain and 19(30%) had no pain where as in post test majority 19(63.3%) had no pain and 11(36.7%) had pain among infants receiving intra venous therapy.

Table 3 depicts the effectiveness of breast feeding on level of pain among infants receiving intra venous therapy which was tested by using paired t test. Mean post-test pain score was 3.33±0.844 was reduced from pretest mean pain score was 4.17±1.117 with mean difference of 0.83 and obtained (t value=3.403, df=29, p=0.002) was found statistically highly significant at $p<0.05$ level. Findings indicate that breast feeding was effective in reducing the level of pain among infants receiving intra venous therapy.

Table 4 depicts the association between post-test level of pain among infants receiving intra venous therapy with their selected demographic variables which was tested by using chi-square test. Result revealed that demographic variables such as age of child, gender, birth weight, gestational age, Days of admitted in hospital, and educational status of mother were not found any significant association at $p<0.05$ level with post-test level of pain among infants receiving intra venous therapy.

Table 1: Frequency and Percentage Distribution of Demographic Variables (N=30)

S. No	Demographic Variables	Frequency	Percentage
1	Age of child		
	1-3 months	1	3.3
	4-6 months	16	53.3
	7-9 months	11	36.7
	10-12 months	2	6.7
2	Gender		
	Male	20	66.7
	Female	10	33.3
3	Birth weight		
	< 1000 gm	0	0
	1001 – 2000 gm	20	66.6
	2001 – 3000 gm	8	26.7
	Above 3000 gm	2	6.7
4	Gestational age		
	< 30 weeks	2	6.7
	31-34 weeks	12	40
	35-37 weeks	15	50

	Greater than 37 weeks	1	3.3
5	Days of admitted in hospital		
	1-5 days	7	23.3
	6-10 days	13	43.4
	11-15 days	9	30
	More than 15 days	1	3.3
6	Educational status of mother		
	Primary school	17	56.7
	Secondary school	8	26.7
	Higher secondary	4	13.3
	Graduation and above	1	3.3
	Illiterate	0	0

Table 2: Distribution of pre-test and post-test level of pain among infants receiving intra venous therapy (N=30)

Level of pain	Pre-Test		Post-Test	
	f	%	f	%
No pain	9	30	19	63.3
Pain	21	70	11	36.7

Table 3: Effectiveness of breast feeding on level of pain among infants receiving intra venous therapy (N=30)

Pain	Mean	SD	Mean D	t value	df	P value
Pre-test	4.17	1.117	0.83	3.403	29	0.002*
Post-test	3.33	0.844				

*p<0.05 level of significance

Table 4: Association between post-test level of pain among infants receiving intra venous therapy with their selected demographic variables (N=30)

S. No	Demographic Variables	Post-test pain		$\chi 2$ value	df	p value
		No pain	Pain			
1	Age of child			3.845	3	0.279^{NS}
	1-3 months	0	1			
	4-6 months	9	7			
	7-9 months	9	2			
	10-12 months	1	1			
2	Gender			3.517	1	0.061^{NS}
	Male	15	5			
	Female	4	6			
3	Birth weight			0.179	2	0.914^{NS}
	< 1000 gm	--	--			
	1001 – 2000 gm	13	7			
	2001 – 3000 gm	5	3			
	Above 3000 gm	1	1			
4	Gestational age			3.014	3	0.389^{NS}
	< 30 weeks	2	0			
	31-34 weeks	8	4			
	35-37 weeks	9	6			
	Greater than 37 weeks	0	1			
5	Days of admitted in hospital			1.986	3	0.575^{NS}
	1-5 days	5	2			
	6-10 days	8	5			
	11-15 days	6	3			
	More than 15 days	0	1			
6	Educational status of mother			5.113	3	0.164^{NS}
	Primary school					
	Secondary school	12	5			
	Higher secondary	6	2			
	Graduation and above	1	3			
	Illiterate	0	1			

*p value < 0.05 level of significance NS-Non Significant

CONCLUSION

The results of the study showed that there was a significant difference found in degree of pain and the mean duration of crying during intravenous therapy in the experimental group as compared to control group. This changed could be due to effect of breastfeeding intervention during Intravenous therapy. Hence the investigator concluded that breast feeding was very effective in reducing the pain and duration of crying during intravenous therapy.

CONSENT

As per international standard or university standard, students written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The study was approved from ethical committee of Sumandeep Vidyapeeth institutional ethical committee and ethical approval numberis SVIEC/ON/NURS/SRP/OCT/23/23.

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