



Effectiveness Of Oral Glucose To Relieve Pain Among Infants During Venflon Insertion

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ABSTRACT

Pain is comprehensive childhood experience which includes emotional, physiological, and social dimensions. In modern times, insertion of venflon is an ongoing cause of distress in hospitalized infants and in medical practice. According to WHO, treatment of pain is a fundamental human right which needs specialized techniques. The primary aim of this study was to determine the efficacy of glucose in relieving infants' pain during insertion of venflon. The investigation was carried out at TMU Hospital, Moradabad, Uttar Pradesh. The sample was chosen using a simple random probability sampling technique. Following that, samples were separated into two groups: intervention and observation. The infants in the study were divided into 15 intervention and 15 observation groups. According to the study's findings, out of 15 infants in the intervention group, 6 (40%) reported mild discomfort, 9 (60%) reported moderate discomfort, and none reported severe discomfort. However, out of the 15 infants in the observation group, 11 (73.3%) had severe discomfort, 4 (26.7%) had moderate discomfort, and none had light discomfort. Infants experience discomfort and distress after the venflon insertion, hence it is important to specify whether pharmaceutical or non-pharmacological interventions should be used to lessen the newborns' suffering. The study's findings suggested that administering oral glucose is simpler, safer, and more cost-effective than using extra pharmaceutical painkillers.

Keywords: *Effectiveness, Pain, Infants, Oral Glucose, Venflon Insertion*

INTRODUCTION

Infant's skin to be most extremely delicate, fragile, or vulnerable kind and could become easily injured if it's not properly cared for. The baby's wellbeing includes his physiological, social, and psychological wellbeing. In modern times, insertion of venflon is an ongoing cause of distress in hospitalized infants and in medical practice. According to WHO, treatment of pain is a fundamental human right which needs specialized techniques.

Nowadays, every baby is subjected to traumatic interventions that require Skin incision is a common medical procedure. Because pain from needle insertion operations is not always successfully controlled. Non-pharmacological treatment or techniques to alleviate procedure-related discomfort and limit probable pharmaceutical side effects include frequently less expensive, as well as a nurse could give it alone.

These techniques are said to complement traditional drug pain management. In newborns undergoing medical operations, oral glucose was discovered to have analgesic properties. Throughout human development, sweetness has been a factor in dietary intake, helping to shift eating habits in favour of meals that are high in energy as well and essential nutrients. Because venflon insertion has become a therapy for children with certain conditions. This is the duty of the nurses to reduce discomfort during insertion, which reduces the care provider's concern, encourages compliance, and provides comfort to the infants.

OBJECTIVES OF THE STUDY

- 1) To determine the behavioral response to pain among infants during venflon insertion in intervention group
- 2) To determine the behavioral response to pain among infants during venflon insertion in observation group
- 3) To compare the behavioral responses to pain between intervention and observation group during venflon insertion
- 4) To figure out the association between the behavioral response to pain with the selected demographic variables in intervention group and observation group

Assumptions

- ❖ When the venflon is inserted, babies feel even more discomfort.
- ❖ Non-pharmacological strategies might be applied to relieve pain.
- ❖ Children cannot express their pain as adults.
- ❖ One of the most recent trends in pediatric practice is the use of atraumatic care.

Hypothesis

Hypotheses were tested at 0.05 level of significance

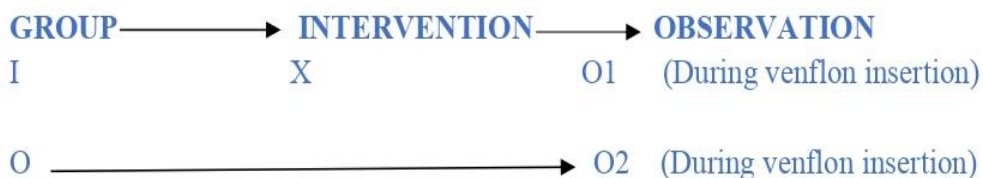
H1: The mean behavioural response to pain scores of intervention group during the insertion of venflon was significantly lower than the mean behavioural response to pain scores of observation group during the insertion of venflon.

H2- There was significant association between the behavioral response to pain scores with the selected demographic variables in the intervention group and observation group.

MATERIALS AND METHODS OF THE STUDY

Research Approach - Quantitative Research Approach

Research Design - True Experimental (Posttest-Only Control Group Design)



I	Intervention group
O	Observation group
X	Intervention i.e., administering 2ml of oral glucose in the form of a 25% dextrose solution two minutes before inserting the venflon
O1	Observation of intervention group after the intervention
O2	Observation of the observation group without giving intervention

FIGURE 1: Schematic representation of research design

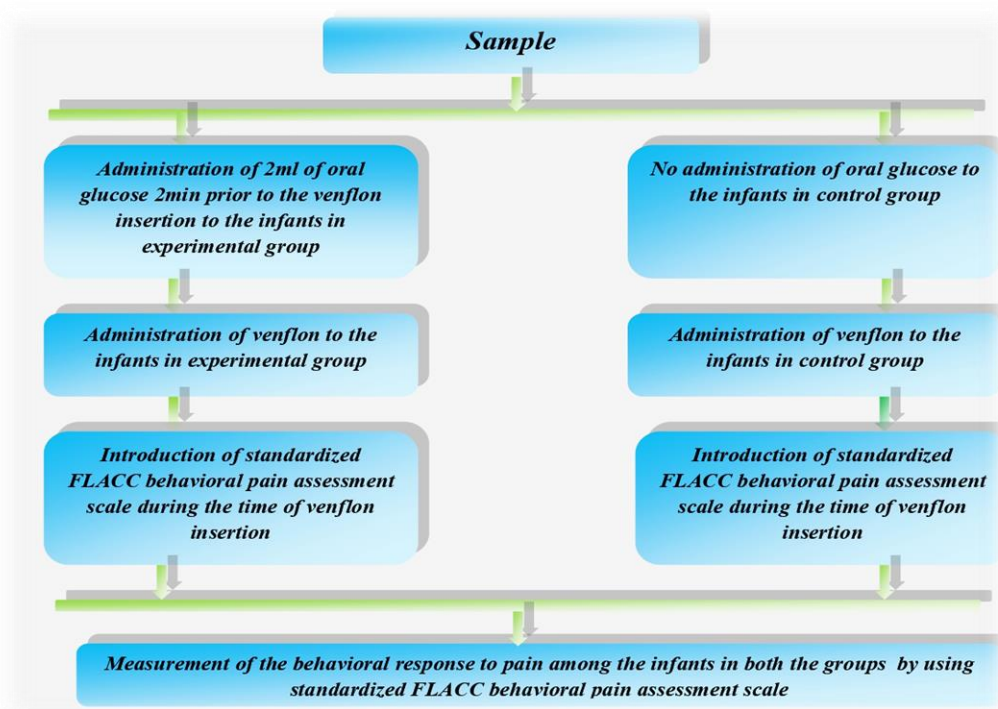


FIGURE 2: Flow chart of research design

Variables

Dependent Variable: Pain experienced during venflon insertion

Independent Variable: Oral glucose in the form of 2 ml of 25% dextrose

Demographic Variable: Infant's age, weight, previous experience related to Venflon insertion, place of residence, education status of father, education status of mother, and source of information

Sample

Infants between the ages of six months and twelve months

Sampling Technique

Simple random probability sampling technique

Sample Selection Criteria

Inclusion Criteria

- Infants between the ages of six and twelve months of age.
- Infants undergoing venflon insertion by single prick.
- Infants whose venflon insertion was performed in a treatment room.

Exclusion Criteria

- Those infants who are asleep or just partially awake.
- Infants whose mothers are present when the venflon is inserted.

Description Of The Tool

Tool 1 – Demographic Performa

Tool2- Standardized FLACC behavioural pain scale

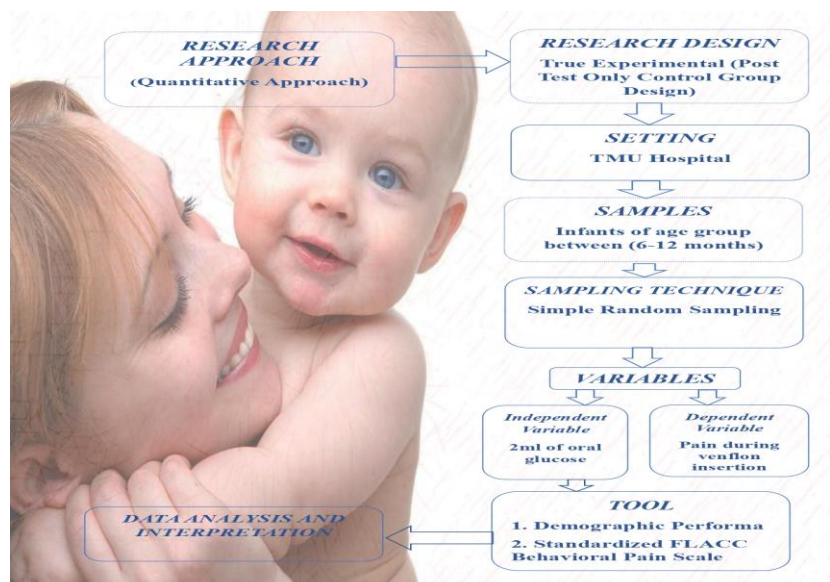


FIGURE 3: Schematic representation of research methodology

RESULT

The data gathered was arranged and presented in the sections below	
SECTION 1	Description of the Socio demographic variables
SECTION 2	Findings related to behavioral response to pain among infants during venflon insertion in intervention group
SECTION 3	Findings related to behavioral response to pain among infants during venflon insertion in observation group
SECTION 4	Findings related to compare the behavioral responses to pain between experimental and observation group during venflon insertion
SECTION 5	Findings related to association between the behavioral responses to pain with the selected demographic variables of intervention group
SECTION 6	Findings related to association between the behavioral responses to pain with the selected demographic variables of Observation group

Section 1

TABLE 1: Frequency and percentage of distribution of demographic variables

Demographic Variable	Intervention group		Observation Group	
	Frequency	Percentage	Frequency	Percentage
Age (in months)				
6 – 9 month	8	53.4%	8	53.4%
10 - 12 month	7	46.6%	7	46.6%
Weight in kg				
6-10 kg	5	33.3%	10	66.7%
10.1 - 14 kg	10	66.7%	5	33.3%
Previous experience				
Moderately painful	13	86.7%	6	40%
Severely painful	2	13.3%	9	60%

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Place of residence				
Urban	6	60%	7	46.7%
Rural	9	40%	8	53.3%
Education status of mother				
Illiterate	1	6.7%	6	40%
Primary	7	46.7%	5	33.3%
Higher Education	6	40%	4	26.7%
Graduation	1	6.7%	0	0%
Education status of father				
Illiterate	1	6.7%	0	0%
Primary	2	13.3%	4	26.7%
Higher Education	5	33.3%	8	53.3%
Graduation	7	46.7%	3	20.0%
Source of information				
Newspaper	2	13.3%	2	13.3%
Radio	1	6.7%	2	13.3%
Television	2	13.3%	4	26.7%
Health care worker	4	26.7%	5	33.3%
Advertisement	6	40.0%	2	13.3%

The findings reveal that of the samples, 14 (46.7% of the sample) and 16 (53.3%, respectively, correspond to the age groups of 10 to 12 months and 6 to 9 months, respectively. 15 (50%) of the sample falls into both groups of up to 6 to 10 kilogrammes and up to 10.5 to 14 kilogrammes. Nearly all of the samples (19(63.4%) have had moderately painful previous venflon insertion experience, while 11(36.6%) have had very painful previous venflon insertion experience. Amongst the thirty participants in the samples, 16 (53.3%) dwells in an urban area, while 14 (46%) lived in a rural area. A significant portion of the mothers (12%) have a primary education. A significant

percentage of fathers (43.3%) have a higher level of education.

Section 2

Demonstrates how infants in the intervention group behave in reaction to pain. The response on face received a 36.5% mean score of 0.73 with standard deviation of 0.11; on leg, a 40% mean score of 0.80 with a standard deviation of 0.14; on activity, a 40% mean score of 0.80 with standard deviation of 0.14; on cry, a 60% mean score of 0.60 with a standard deviation of 0.16; and on consolation, a 40% mean score of 0.80 with a standard deviation of 0.10.

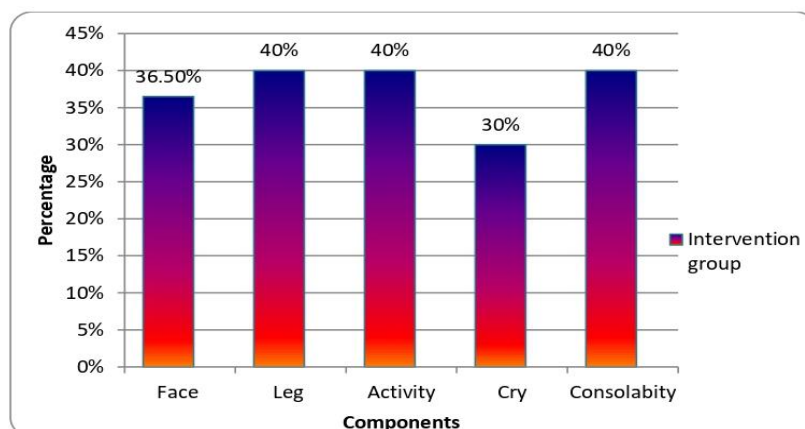


FIGURE 4: Finding related to behavioral response to pain among infants during venflon insertion in intervention group

Section 3

Demonstrates how infants in the observation group behaved in reaction to pain. The results

show that responses to the face (43 percent mean score -0.86 with SD of 0.16), the leg (70 percent mean score -1.40 with SD of 0.13), the activity

(80 percent mean score -1.60 with SD of 0.13), 0.14), and the consolation (93% mean score -1.86 with SD of 0.09), the cry (90 percent mean score -1.80 with SD of 0.14), and the consolation (93% mean score -1.86 with SD of 0.09).

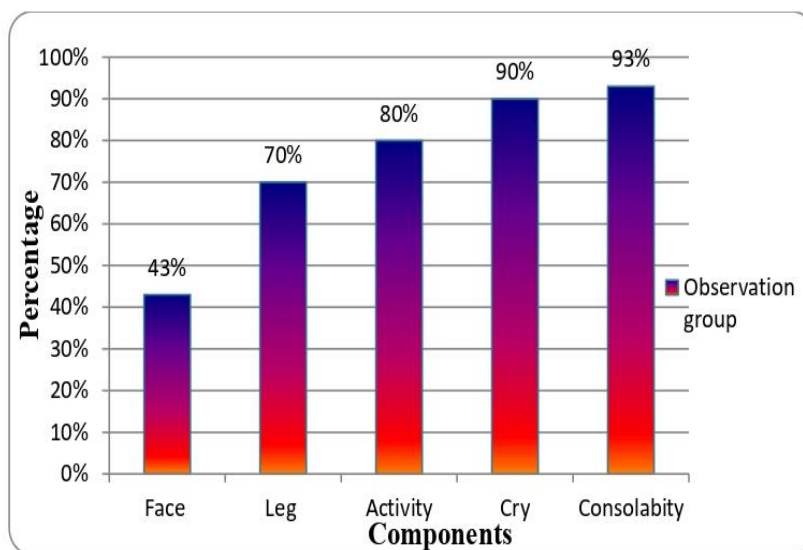


FIGURE 5: Finding related to behavioural response to pain among infants during venflon insertion in observation group

Data illustrates that 6 (40%) of the intervention participants reported mild pain, whereas 9 (60%) reported moderate pain. 4 (26.7%) of the observation participants reported moderate pain, whereas 11 (73.3%) reported severe pain.

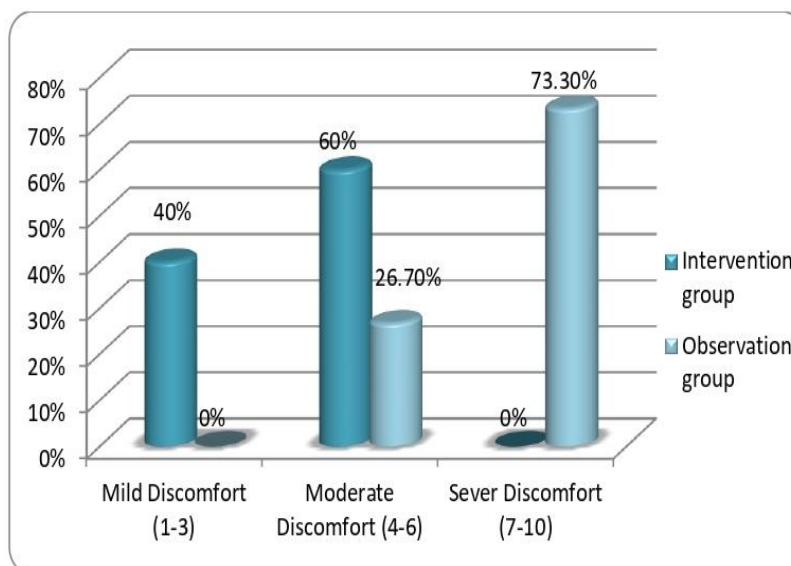


FIGURE 6: Finding related to infants level of pain between intervention and observation group during venflon insertion

Section 4

Findings demonstrates that the intervention group's posttest mean score of 3.73 is lower than the observation group's posttest mean score of 7.53. The statistical paired't' test for total

responses to pain is found to have a value of 7.333, which is more than p, indicating that the difference in scores between the intervention group and observation group is determined to be statistically significant at the 0.05 level.

TABLE 2: Finding related to compare the behavioral responses to pain between intervention and observation group during venflon insertion by paired “t” test (N=30)

Components	Group	Mean	Mean %	SD	Mean Difference	‘t’ value	P value
Face	Intervention	0.73	36.5%	0.11	0.13	0.564	0.582
	Observation	0.86	43%	0.16			
Leg	Intervention	0.80	40%	0.14	0.60	3.154	0.007
	Observation	1.40	70%	0.13			
Activity	Intervention	0.80	40%	0.14	0.80	4.000	0.001
	Observation	1.60	80%	0.13			
Cry	Intervention	0.60	30%	0.16	1.20	4.583	0.000
	Observation	1.80	90%	0.14			
Consolability	Intervention	0.80	40%	0.10	1.06	6.959	0.000
	Observation	1.86	93%	0.09			
Total	Intervention	3.73	37.3%	0.39	3.80	7.333	0.000
	Observation	7.53	75.3%	0.23			

Section 5

The computed p value for each demographic variable is greater than the P value (0.05), indicating that there is not a significant association between behavioural responses to pain with the intervention and observation group's chosen demographic characteristics.

CONCLUSION

Infants experience discomfort and distress after the venflon insertion, hence it is important to specify whether pharmaceutical or non-pharmacological interventions should be used to lessen the newborns' suffering. The study's findings suggested that administering oral glucose is simpler, safer, and more cost-effective than using extra pharmaceutical painkillers. The study's results led to the following conclusions, which were reached. When the venflon was inserted, around 11 (73.3%) of the infants in the observation group suffered considerable discomfort, while none of the children in the intervention group did. It demonstrates the proof

that oral glucose treatment reduces babies' suffering during venflon insertion.

CONFLICTS OF INTEREST

The author claims to be free of any conflicts of interest.

FUNDING

The author claims that no financing was obtained.

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