



STUDY TO ASSESS THE EFFECTIVENESS OF DIVERSION THERAPY ON PAIN AMONG INFANTS RECEIVING INTRAMUSCULAR INJECTIONS AT SELECTED HOSPITALS OF JABALPUR CITY

Ms. Neelam Patel

Msc Nursing Child Health Nursing Rani Durgavati University Jabalpur M.P.

Dr. Mrs. Malti Lodhi*

HOD Of CHN/Vice Principal/ Professor In Jabalpur Institute Of Nursing Science And Research Jabalpur M.P. *Corresponding Author

KEYWORDS :

INTRODUCTION

Injections are the painful procedures performed on infants. It is assumed that such procedures cause a certain degree of pain. Unlike the widely held belief of the past years, today it is accepted that small children and even newborns are able to feel pain and respond to painful stimuli. The infant undoubtedly has the neuronal apparatus to detect a painful stimulus and perhaps remember it.

The word pain is derived from the Latin word 'poena' which means punishment, which in turn derived from the Sanskrit root 'pu' meaning purification. The international association for the study of pain defines, "pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage". The international association for the study of pain further states that, "pain is subjective. Each individual learns the application of the word through experiences related to in early life." This definition emphasizes the individuality of each person's pain response and the importance of pain experiences, especially those in early life, in shaping that response. Thus, a child experience during painful medical procedures likely plays a significant role in shaping that individuals pain response to future events.

Pain in children is often under treated. The reasons for the lack of adequate pain control may include: myths about pain and pain management, fears held by parents and health professional, and the lack of appropriate pain assessment. Myths surrounding pain management may prevent the timely and appropriate treatment of children. Nurses are in a unique position to improve the management of children pain because children and parents will often tell them things they do not tell physicians and they are often the professionals who have the most contact with an ill child in and out of the hospital. Nursing intervention can alleviate some of the fear and pain caused by painful procedures (Eland 1990).

PROBLEM STATEMENT

"Study to assess the effectiveness of diversion therapy on pain among infants receiving intramuscular injections at selected hospitals of Jabalpur city"

OBJECTIVES

1. Assess the effectiveness of diversion therapy to reduce pain in intramuscular injection among infants in experimental group.
2. Assess the intensity of pain among infant receiving intramuscular injection in control group.
3. Compare the intensity of pain in experimental group and control group.
4. Determine the association between intensity of pain with the selected demographic variables in experimental group.
5. Determine the association between intensity of pain with the selected demographic variables in control group.

HYPOTHESES

- H₁- There will be a significant difference in the mean post- test score in the intensity of pain in experimental group and control group.
- H₂- There will be significant association between intensity of pain with the selected demographic variables in experimental group and control group.

RESEARCH APPROACH

the experimental evaluative approach.

RESEARCH DESIGN

Post-test only control group design

INDEPENDENT VARIABLE

diversion therapy (bright colored sound producing rattle).

DEPENDENT VARIABLE

intensity of pain in intramuscular injection.

SETTING OF THE STUDY

This study was conducted in selected immunization ward, Rani Durgawati Chikatshalay Government Hospital Elgin Jabalpur city. The rationale for selection of this hospital was economy in term of time, easy transport facilities, administrative approval, co-operation and above all, the selected hospital fulfilled the criteria of the sampling technique.

TARGET POPULATION

infant's age group of 1month-12 months receiving IM injection in Jabalpur city.

ACCESSIBLE POPULATION

The accessible population was all infants age group of 1month-12 months receiving IM injection attending immunization ward in Rani Durgawati Chikatshalay, Government Hospital (Elgin) Jabalpur City.

SAMPLE

infants between age group 1months-12months with intramuscular injection.

SAMPLE SIZE

60 infants comprising of 30 samples in experimental group and 30 samples in control group.

SAMPLING TECHNIQUE

purposive sampling technique

DATA COLLECTION PROCEDURES

The main study was conducted by the investigator in the month of from 12th April 2016 in Rani Durgawati Chikatshalay Government Hospital Elgin Jabalpur city.

Keeping in mind the selection criteria, 60 infants who are receiving intramuscular injection (30 each for experimental and control group) were selected for the study. The investigator introduced and explained the purpose of the study; consent was obtained from each patient. The demographic data was directly collected from the infant's parents and care giver and also from hospital records.

Investigator assessed the effectiveness of diversion therapy during and after intramuscular injection in reducing pain among infants using Neonatal Infant's Pain Scale (NIPS). The first 30 subjects were assigned to experimental group and second 30 for control group. The parents were holding the infants and applying diversion therapy (bright colored sound producing rattle) was during and only for two minutes after the IM injection for experimental groups and no any interventions was given to control group.

ASSOCIATION OF INTENSITY OF PAIN SCALE IN CONTROL GROUP WITH SELECTED DEMOGRAPHIC VARIABLES

(N=30)

S. No	Variables	Relaxed and comfortable	Mild pain	Moderate pain	Severe pain	total	df	Chi-value	p-value	Inference
1	Age (in month)									
	1month-3 months	0	0	10	4	14				
	3months- 6months	0	0	10	2	12				
	6months- 9 months	0	0	0	4	4	9	60	0	MS
	9months-12months	0	0	0	0	0				
2	Gender									
	Female	0	0	15	5	20				
	Male	0	0	5	5	10	3	0.64	0.72	NS
3	Gestational age									
	Pre –term	0	0	6	2	8				
	Term	0	0	13	7	20	6	10.7	0.02	S
	Post –term	0	0	1	1	2				
4	Weight for age (in percentile)									
	<3 rd	0	0	12	10	22				
	3 rd -50 th	0	0	6	0	6	9	5.75	0.21	NS
	50 th - 97 th	0	0	2	0	2				
	>97 th	0	0	0	0	0				
5	Previous experience of IM injection									
	Yes	0	0	15	5	20				
	No	0	0	5	5	10	3	17.14	0	MS
6	Type of vaccination									
	Pentavalent vaccine	0	0	10	4	14				
	IPV	0	0	10	6	16	3	30	0	MS
7	Relation with feeding before IM Injection									
	<2 Hrs	0	0	15	3	18				
	>2 Hrs	0	0	5	7	12	3	4.6	0.1	NS
8	Relationship of the child with care giver who is present during IM injection									
	Mother	0	0	20	10	30				
	Father	0	0	0	0	0	9			NP
	Grand parents	0	0	0	0	0				
	Others	0	0	0	0	0				

RESULT

Data analysis related to Mean, SD, t-value and p-value of experimental and control group The data in shows that out of 30 each samples in experimental and control group, and experimental group intensity of pain score the mean score is 4 and standard deviation is 1.43 and in control group intensity of pain score the mean score is 6 and standard deviation is 0.83, and t-value is 1.89, and p-value is 2.00.

(N=30)

S.No.	Group	Mean	SD	t-value	p-value
1	Experimental group	4	1.43	1.89	2.00
2	Control group	6	0.83		

The findings show that control and experimental group in the post-injection pain level. It was found that the level of pain in the experimental group was lower than the control group. The mean and SD of control group was 6 ± 0.83 and in the experimental group was 4 ± 1.43 and t test value (1.89) was highly significant. This indicates that Diversion therapy (bright colored sound producing rattle) was found to be effective for reducing of pain of infants receiving IM injection.

CONCLUSION

The study concluded that the Injections are the universal experience for children. Diversion therapy (bright colored sound producing rattle) was found to be effective for reducing of pain of infants receiving IM injection. Therefore it can be used as a routine with immunization so that infants' pain can be managed in an effective way.

REFERENCES**BOOKS**

- Abdel Razek A, Az El-Dein N. 2009 International Journal of Nursing Practice. 2009 Apr;15(2):99-104. doi: 10.1111/j.1440-172X.2009.01728.x.
- Acta Medica Iranica, 44(5): 316-322; F. Sajedi, Z. Kashaninia, M. Rahgozar and others 2006 Tehran University of Medical Sciences.
- Aida Abdel Razek DNsc MSN BSN Associate Professor, Faculty of Nursing Philadelphia University, Philadelphia, Jordan, Effect of breast-feeding on pain relief

during infant immunization injections . International Journal of Nursing Practice 2009;15: 99–104.

- Aranha PR Umarani J, international journal of rescent scientific research vol.4, issue,5,pp.645-648,may,2013.
- Ball J W, Binder C,Text book of pediatric nursing. 4thedn. New Delhi: Pearson education;2001.p.470.

JOURNAL

- Aranha PR Umarani J, The Nursing journal of India 105:1 pg 5-7.

WEBSITES

- <http://www.medicines.ox.ac.uk>.
- <http://preemies.about.com/od/preemiehealthproblems/f/AsandBs.htm>
- <http://www.informaworld.com/smpptitle--content=1713415498>
- [http://www.jognn.org/article/S0884-2175\(15\)31400-3](http://www.jognn.org/article/S0884-2175(15)31400-3)
- [http://www.jpsmjournals.com/article/0885-3924\(96\)](http://www.jpsmjournals.com/article/0885-3924(96))
- <http://www.ncbi.nlm.nih.gov/pubmed/23798927?dopt>