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Research Article

EFFECTIVENESS OF DISTRACTION IN ACTION ON PAIN DURING INTRAMUSCULAR INJECTION AMONG CHILDREN IN SELECTED HOSPITAL AT CHENNAI

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A B S T R A C T

Pain is a universal condition experienced by all persons regardless of age. As children grow, they receive routine vaccinations are regularly exposed to injections and pain. A study was conducted to assess the effectiveness of distraction in action on pain during intramuscular among children. The study aimed to assess the post-test level of pain among children in experimental and control group during intramuscular injection using FLACC pain scale. Quasi experimental post-test only design was conducted among 40 children, 20 in each group by purposive sampling. The findings revealed that there is a significant difference in the mean pain score (4.58) between the experimental group and control group, which shows distraction technique was effective for reducing pain. The study revealed that the distraction in action on pain during intramuscular injection in children was effective. The study findings show that there is decreased in level of pain perception in children among experimental group who received distraction and the pain level in control group remains high in children those who received routine care.

INTRODUCTION

In particular pain is defined as an unpleasant emotional sensation of a person's past experiences. As children grow, they receive routine vaccinations are regularly exposed to injections and pain. Needle related procedures induce anxiety and fear in children during hospitalization and are also associated with negative emotions and feelings. Children remember the post painful experiences, and the negative memory of pain or fear caused by poor management during treatment can affect the subsequent treatment.

Several international pain – related experts' group, including the World Health Organization (WHO) contend that optimally effective pain management is a fundamental human right and good and ethical practice. To ensure adequate pain relief, or to make pain more tolerable and to give the children a sense of control over the situation, non- Pharmacological methods are widely accepted as additional strategies that may be used independently during painful procedures.

Distraction is a non-pharmacological intervention that diverts attention from a painful stimulus through passively redirecting the subject's attentions or by actively involving the subject in the diversion task. Distraction involving capturing child's attention passively and focusing away from the stressful situation and to something more pleasant. Regarding distraction intervention types Audio-Visual distracters has a greater impact on diverting the infants.

According to SRS, 2022. The IMR in Tamil Nadu rates for 13 deaths 1000 per live birth. It is considered that vaccination has a greater impact on the life of the infants as the non-vaccinated infant are more prone for various fatal disease, Although the vaccination causes more pain and stressful situation for child and family, it serves as major life saving measures during first year of life.

Statement of Problem

A Study to assess the effectiveness of distraction in action on pain during intramuscular injection among children at selected hospital, Chennai.

Objectives

- To assess the post-test level of pain among children in experimental and control group during intramuscular injection.
- To assess the effectiveness of distraction in action on level of pain among Children in experimental and control group during intramuscular injection.
- To associate the level of pain among children in experimental and control group during intramuscular injection with their selected demographic variables

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Hypothesis

H1: There is a significant difference between level of pain among children in experimental and control group during intramuscular injection.

H2: There is a significant association between the level of pain among children in experimental and control group with their selected demographic variables

METHODOLOGY

The research approach selected for study was Quantitative approach.The design selected for study was Quasi experimental post-test only design. The study was conducted in Mugalivakkam Primary Health Centre, Chennai. It covers above 10,000 population. Around 40-60 children attend the Immunization OPD per week. The population consist of infants those who were attending OPD. The sample of 40children, who fulfil the inclusion criteria by using purposive sampling technique were participated and they were divided as experimental and control with 20 children in each group. The experimental group received the Intramuscular Injection. A 5 minutes distraction video was shown to the children before 1 min, during and after 5 minutes of receiving Intramuscular injection. The data was collected after distraction using FLACC pain scale.

RESULTS AND DISCUSSION

The demographic characteristics revealed that the age of experimental group, 3(15%) children belong to 6weeks, 7(35%) children to10 weeks and 10(50%) children to14 weeks. In control group 1(5%) child belong to 6 weeks, 5 (25%) to10 weeks and14 (70%) to 14 weeks old. With regard to Gender in experimental group, 8(40%) were male, 12(60%) were female. In control group 12 (60%) were male, 8 (40%) were female. With respect to Mothers knowledge Regarding Post vaccination Care in experimental group, 18 (90%) mothers have knowledge regarding post vaccination care and 2 (10%) mothers did not have the same.

Focused on Previous Allergic reaction towards intramuscular injection: There was no previous allergic reaction towards intramuscular injection among infants in experimental and control group.

The first Objective was to assess the post-test level of pain among children in experimental and control group during intramuscular injection.

In the experimental group, majority ofchildren15 (75%) had experienced mild pain, while remaining 5 (25%) children experienced moderate pain. Whereas, in the control group, 15(75%) of children experienced severe pain, and 4 (20%) experienced moderate pain. Notably, in the control group, 1 (5%) of children experienced no pain during the injections.

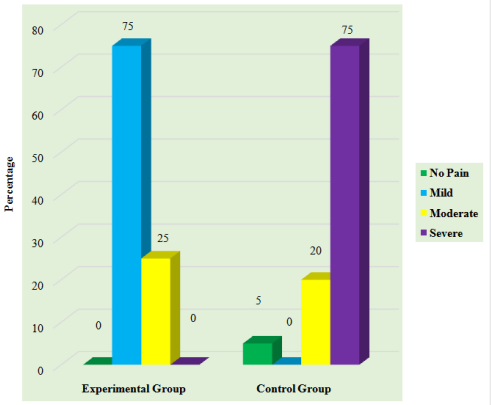

Fig. 1 Represents the Frequency and Percentage Distribution Post test Level of Pain among Children in Experimental and Control Group during Intramuscular Injection

The Second objective was to assess the effectiveness of distraction in action on level of pain among Children in experimental and control group during intramuscular injection

In the experimental group, the mean pain score was 2.67 with a standard deviation of 1.39. Whereas, the control group the mean pain score was 7.25 which was higher than experimental group and a standard deviation of 2.09. The t-test, with 39 degrees of freedom, revealed a highly significant difference

Table 1 Frequency and percentage distribution of experimental and control group

N=40

Sl. No	Demographic Characteristics	N=40			
		Experimental Group		Control Group	
		n1=20		n2=20	
		F	%	F	%
1	**Age**				
	6weeks	3	15	1	5
	10weeks	7	35	5	25
	14weeks	10	50	14	70
2	**Gender**				
	Male	8	40	12	60
	Female	12	60	8	40
3	Mothers' Knowledge Regarding Post-Vaccination Care				
	Yes	18	90	12	60
	No	2	10	8	40
4	Previous Allergic Reactions to Intramuscular Injections Yes	-	-	-	-
	No	20	100	20	100

In control group12 (60%) mothers had knowledge regarding post vaccination car, 8 (40%) mothers don't have the same.

Table1 Association between the demographic variables and the level of pain among children during Intramuscular injection in experimental group

S. No	Demographic variables		Level of pain		χ^2 valuedf =1	Significant value
			Mild pain	Moderate pain		
1	Age	10 weeks	9	2	1.221NS	0.269
		14 weeks	6	4		
2	Gender	Male	6	3	0.175 NS	0.676
		Female	9	3		
3	Mothers Knowledge regarding Post Vaccination Care	Yes	14	5	0.497 NS	0.481
		No	1	1		

Table 2 Association between the demographic variables and the level of pain among children during Intramuscular injection in Control group

S. No	Demographic variables		Level of pain		χ^2 valuedf =1	Significant value
			Mild pain	Moderate pain		
1	Age	10 weeks	1	5	0.102NS	0.750
		14 weeks	4	10		
2	Gender	Male	1	10	2.249 NS	0.134
		Female	4	5		
3	Mothers Knowledge regarding Post Vaccination Care	Yes	4	8	0.608 NS	0.435
		No	1	7		

(t value = 8.280, $p < 0.05$) between the two groups. The findings revealed that there is a significant difference in the mean pain score between the experimental group and control group, which shows distraction technique, was effective for reducing pain. Hence the hypothesis H_1 is accepted.

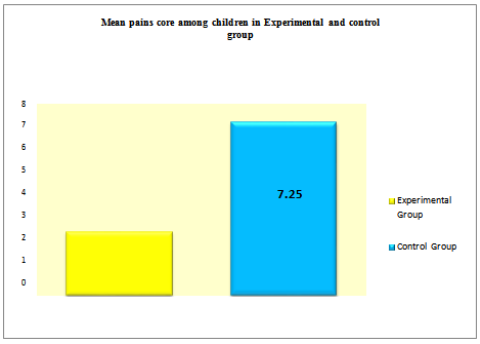

Fig. 2 Bar diagram shows the Mean Pain Score among Children in Experimental and Control Group during Intramuscular Injection

The third objective was to associate the level of pain among children in experimental and control group during intramuscular injection with their selected demographic variables.

The finding reveals that there is no significant association between the selected demographic characteristics such as age, gender and mother's knowledge regarding post vaccination care with the level of pain among children during intramuscular injection in experimental group and control group. Therefore, there is no significant to association between level of pain among children in experimental and control group during intramuscular injection with their selected demographic variables and hence the hypothesis H_2 is not accepted.

The study finding shows that there is decreased in level of pain perception in children among experimental group who received distraction and the pain level in control group remains high in children those who received routine care. Thus, distracters are simple and easily applicable in pain management during care of children. The result of this study can be potentially used as non-pharmacological therapy during invasive procedures in children.

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