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A STUDY TO ASSESS THE EFFECTIVENESS OF HELFER SKIN TAP TECHNIQUE ON PAIN REDUCTION DURING INTRAMUSCULAR INJECTION AMONG INFANTS

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ABSTRACT

Pain among infants during intra muscular injection has common problem in India. This study was under taken to assess the effectiveness of Helfer skin tap technique on pain reduction during Intramuscular Injection among infants. Aim of the study:To determine the effectiveness of Helfer skin tap technique on pain reduction among infants undergoing IM Injection at the study setting. Methods:This was a true experimental study conducted among Thirty children (fifteen in experimental group and fifteen in control group) undergoing IM Injection. FLACC observational pain scale was used for pain assessment. Experimental group were given Helfer skin tap technique and control group were not receiving Helfer skin tap technique during IM injection. Intervention was given for 5 minutes before initiation of procedure (IM injection) during procedure and till 5 minutes of procedure. Result:Mean pain score in experimental group was lower than (3.4) that of the control group (8.46).Conclusion: Helfer skin tap technique is effective on reducing pain among infants undergoing IM injection.

INTRODUCTION

Child survival is a field of public health concerned with reducing child mortality. Child survival interventions are designed to address the most common causes of child deaths that occur, which include communicable diseases. Among children under the age of 5 alone, an estimated 5.6 million children die each year mostly from such preventable causes[5]. In developing countries, child mortality rates related to communicable disease reduced by introducing low-cost immunization.

Vaccinations are the safest and most effective way to prevent serious illness and death. In fact, vaccinations prevent approximately 2.5 million deaths every year. However, despite the success of vaccinations in Preventing morbidity and mortality, some countries struggle to maintain high levels of vaccination update[10]. For example, in 2016 only 69% of Indian children aged 19–35 months had fully completed a combined series of childhood vaccinations.

Injection for vaccination, the most common source of iatrogenic pain in childhood .It is administered repeatedly to almost all children throughout infancy, child hood and adolescence. The pain associate with such injections is a source of distress for children, their parents and those administering the injection.

Helfer skin tap technique offers a painless injection. During this technique rhythmical tapping before and through injection over the skin at the site of injection keeps the muscle relaxed and stimulates tall diameter fibers [11]. It provides a mechanical stimulation and distraction during IM injection and therefore helps decreased pain as represented in gate control theory.

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Statement of the problem:

A study to assess the effectiveness of Helfer skin tap technique on pain reduction during intramuscular injection among infants in Tirunelveli Medical College and Hospital.

Objectives of the study:

- To assess the post test level of pain perception among children receiving vaccination in experimental group and control group.
- To evaluate the effectiveness of Helfer skin tap technique on pain perception among children receiving vaccination in experimental group.
- To find out the association between the level of pain perception among children with selected demographic variables such as age, sex, previous hospitalization, previous exposure to painful procedures, guardian.

Hypothesis:

H1:

There is a significant reduction on the pain level among children intramuscular injection after Helfer skin tap technique.

H2:

There is a significant association between the level of pain with selected demographic variables such as age, sex, previous hospitalization and previous exposure to painful procedures, guardian.

Methodology

The research design adopted for this study is true experimental post test only design. The study was conducted in Tirunelveli Medical College and Hospital. The setting was chosen on the basis of reliability, availability of adequate sample and the familiarity of the investigation with the setting. Children in the age group of 1 month to 1 year and undergoing IM Injection in Tirunelveli Government Medical College and Hospital and who fulfilled the selection criteria. The tool was divided in to two section as follows Section A: Demographic Variable, Section B: Behavioral Observation Pain Rating Scale(FLACC SCALE). The participants were selected by using a simple random sampling technique. A sampling of 30 children who were undergoing IM injection were selected for the study among them 15 were allotted for experimental group and 15 for control group. After identifying the injection sight tap the skin 16 times approximately 5 seconds with the palmer aspect of the dominant hand to relax the muscle. After preparing the skin with the alcohol uncap the syringe with the dominant hand make a "V" thumb and index finger tap the skin again for 3 times. Insert the needle into the anterolateral aspect of the thigh. After aspirating to prevent the infection into vessel as per normal routine inject the medication slowly while continuing to tap muscle gently to keep it relaxed. Remove the needle while simultaneously tapping the skin again using "V" tap with the non dominant hand. Control group did not receive the Helfer skin tap technique. Post test level of pain was assessed by using FLACC scale

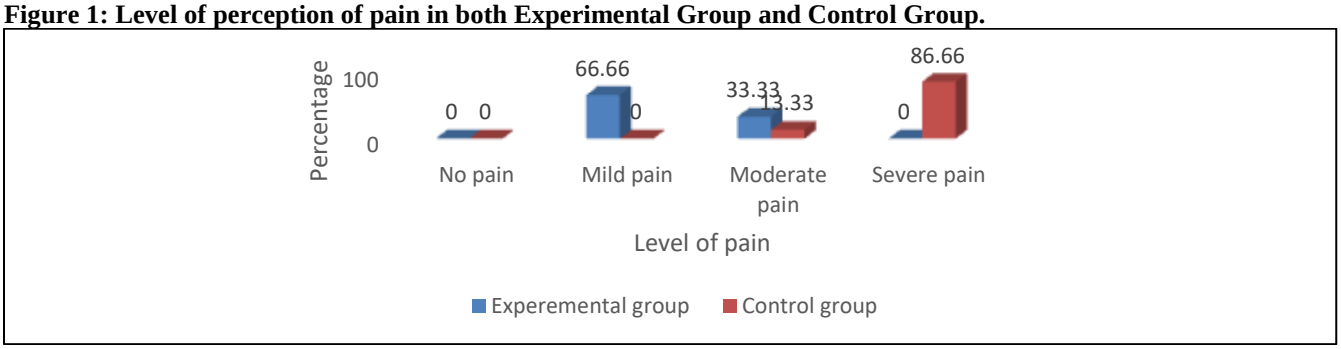
Table 1: Frequency and percentage distribution of the sample based on demographic variables N= 30

Demographic variable	**Experimental group**		**Control group**	
1.**Age**	F	%	f	%
a.1month- 6 month	15	100	14	93.3
b.7 month- 1 year	0	0	1	6.66
2.**Sex**				
a.Male	7	46.66	8	53.33
b.Female	8	53.33	7	46.66
3.**Previous hospitalization**				
a.Yes	7	46.66	6	40
b.no	8	53.33	9	60
4.**Previous exposure to painful procedure**				
a.yes	2	13.33	0	0
b.no	13	86.66	15	100
5.**Guardian**				
a.Mother	3	20	3	20
b.Father	8	53.33	9	60
c.Grand father	2	13.33	0	0
d.Grand mother	2	13.33	3	20

Table 2: Mean, standard Deviation and "t" test value of pain perception among children receiving vaccination in experimental group and control group N=30.

Variables	Group	Mean	Standard Deviation	Unpaired 't' value Calculated value	Table value	'P' Value
Level of pain	Experimental Group	3.4	1.7	2.528		
	Control Group	8.46	5.26	0	41.34	70.05

Figure 1: Level of perception of pain in both Experimental Group and Control Group.



Results and Findings

While considering the age in the experimental group out of 15 children 100%. Participants belong to the age group of 1 month to 6 months, 46.66% were male and 53.33% were female and 53.33% of them having no exposure to previous hospitalization, 86.66% having previous no exposure to painful procedure and 53.33% were having their mother as a guardian.

While considering the age in the control group out of 15 children 93.33% of participants belongs to the age group of 1 month to 6 month and 53.33% are male and 46.66% were female and 60% children were having no exposure to previous hospitalization and 100% of children were not having previous exposure to painful procedure and 60% of children were having their mother as a guardian.

The results were based on the Objectives of the study. The First objective was to assess the post test level of pain perception among children receiving vaccination in experimental group and control group.

It reveals the frequency and percentage distribution of sample based on the level of pain among children in experimental and control group. It is evident from above the table in experimental group 66.66% child had mild pain and 33.33% child had moderate pain. Where as in the control group 13.33%child had moderate pain and 86.66% child had severe pain.

The Second objective was To evaluate the effectiveness of Helfer skin tap technique on pain perception among children receiving vaccination in experimental group and control group

It Reveals the mean and standard deviation of post test level of pain between the experimental and control group. The mean score was 3.4 with Standard deviation was 1.7 in experimental group and the mean score was 8.46 with the standard deviation 5.26 in control group. It also revealed unpaired't' test was used to compare the level of venipuncture pain between the experimental and control group. It was found 't' value indicating there was a highly significant reduction in the level of pain between experimental and control group at $p<0.05$ level. Hence the study hypothesis was accepted.

The Third Objective was To find out the association between the level of pain perception among children with selected demographic variables such as age, sex, previous hospitalization, previous exposure to painful procedures, guardian. It reveals that, the chi square test was used to associate the level of pain with selected demographic variables for experimental group such as age, sex, socio economic status, previous hospitalization, previous exposure to painful procedure. While analyzing the statistical significant of (0.05) level, It shows that there is no significant of association in post test of pain with selected demographic variables P level

CONCLUSION

One of the standardized nursing responsibilities is to administer the injection with a less pain. The present study assessed the effectiveness of Helfer skin tap technique on pain reduction during Intramuscular injection among children. The result of the study concluded that effectiveness of Helfer skin tap technique in pain reduction during intra muscular injection among children. There for the investigator felt that Helfer

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