
Assess the Effectiveness of Helfer Skin Tap Technique on Pain During Vaccination among Infants

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Abstract:

Introduction and background of the study: Pain is an unpleasant sensation that can range from mild, localized discomfort to agony. It is too difficult to face pain of vaccinations in children. Helfer skin tap technique offers a painless injection experience. It provides a mechanical stimulation and distraction during vaccination and thus helps to reduce pain during vaccination.

Methodology: The Quasi experimental research design was used for the study. 60 children below age of 1 year who were receiving pentavalent vaccination in selected pediatric hospitals of Gujarat were selected by non-probability convenient sampling technique and then randomly allocated to experimental and control group (30 each). Data was collected by using FLACC scale to assess the pain level during vaccination. The data was analyzed by using Descriptive and Inferential statistics such as Frequency, Percentage distribution, Mann Whitney test and Chi square test.

Results: There was statistically significant difference found between the level of pain among experimental and control group calculated by Mann Whitney test at the p-value <0.001 level of significance.

Conclusion: Study concluded that there was significant difference between the level of pain among experimental and control group. Hence, the Helfer skin tap technique showed significant effect on pain level during vaccination among infants. All the nurses can perform Helfer skin tap technique in routine practices for reducing pain intensity.

Keywords: Effectiveness; Helfer skin tap technique; Pain; Infants; Pentavalent vaccine

1. INTRODUCTION

An infant is the word derived from the Latin word "Infans", meaning "unable to speak" or "speechless". Infants cry as a form of basic instinctive communication. A crying infant may be trying to express a variety of feelings including hunger, pain or discomfort, overstimulation, boredom, wanting something or loneliness.¹

Pain is a distressing feeling often caused by intense or damaging stimuli. It is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. It is a feeling triggered in the nervous system. Pain may be sharp or dull. It may come and go, or it may be constant.²

Vaccinations can be painful. Kids don't like them, and parents don't like seeing their children suffer.³ Fear of needles is a common phobia for children. Children have fear to the injections and because of that fear they are crying. All parents are continually striving to find the best way to respond to those cries.⁴ Vaccination is the most widely practiced percutaneous procedure. Each child is compulsorily exposed to this in his early childhood. The most common side effect of vaccination is pain.⁵

Injections are the most frequently used medical procedure, with an estimated 12 billion administered throughout the world on an annual basis. Of these 5% or less are for immunization and rest are given for curative purposes. In India, a survey conducted found that 96% of all injections given by private doctors were of antibiotics, vitamins and analgesics. Intramuscular injection can be an unpleasant experience for children, making an appropriate explanation and psychological support necessary.

In 1998, Ms Joanne Helfer made an attempt to alleviate pain due to intramuscular injection by developing, “Helfer Skin Tapping technique” in which tapping of the skin over the injection site. The technique uses basic concepts of theory of pain; including the gate control theory.⁶ Mechanical stimulation which is given by tapping, can diminishes the influence of small, pain-carrying fibers. It consists two basic points:

1. Muscle relaxation, which physically decreases the resistance to needle entry into the skin.
2. Diversion, by simultaneous tapping over the skin before the needle is inserted and removed.⁷

2. MATERIAL AND METHODS

A quantitative approach was used for the study. The quasi experimental research design was adopted to conduct the research study. The objectives of the study were to assess the level of pain during vaccination of experimental group as well as control group with Helfer skin tap technique, to compare the level of pain during vaccination of both groups and to find out association between level of pain during vaccination with their selected demographic variables of experimental group. The target population were children whose age is below 1 year and receiving pentavalent vaccinations from selected paediatric hospitals of Gujarat including Ahmedabad and Vadodara. Using non probability convenient sampling technique 60 infants were selected and randomly allocated in experimental and control group (30 each). A standardized FLACC pain scale was selected to assess effectiveness of Helfer skin tap technique on pain during vaccination among infants.

3. RESULT

The data was analyzed using descriptive and inferential statistics. Mann Whitney test was used to determine the effect of Helfer skin tap technique on pain during vaccination. Chi square test was used to analyse the association between level of pain during vaccination with their selected demographic variables of experimental group.

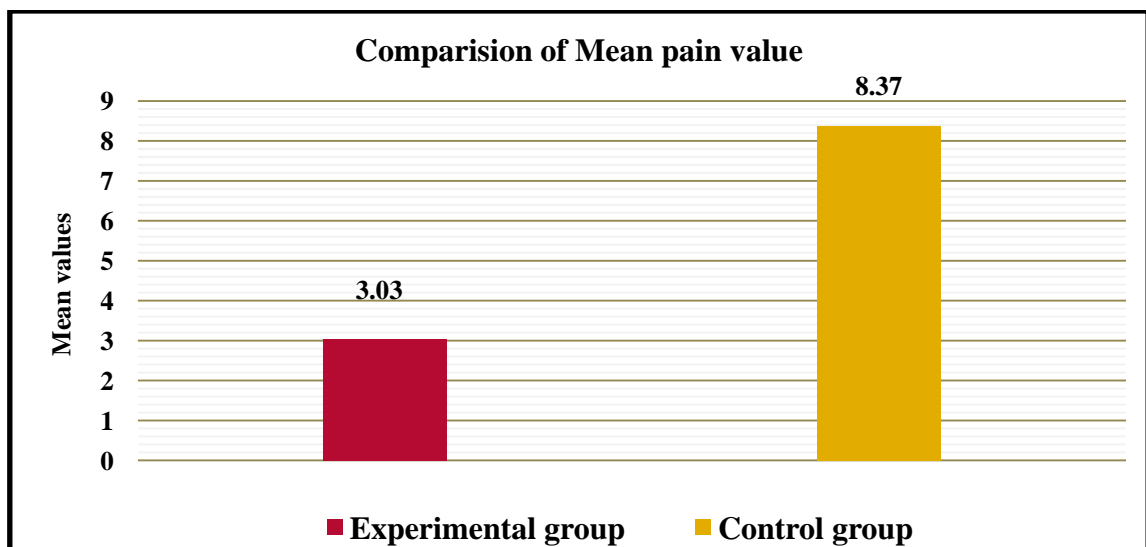
Table No.1:

Group	N	Mean	SD	Mann Whitney test	P value (0.05)
Experimental group	30	3.03	1.63	6	<0.001
Control group	30	8.37	1.27		

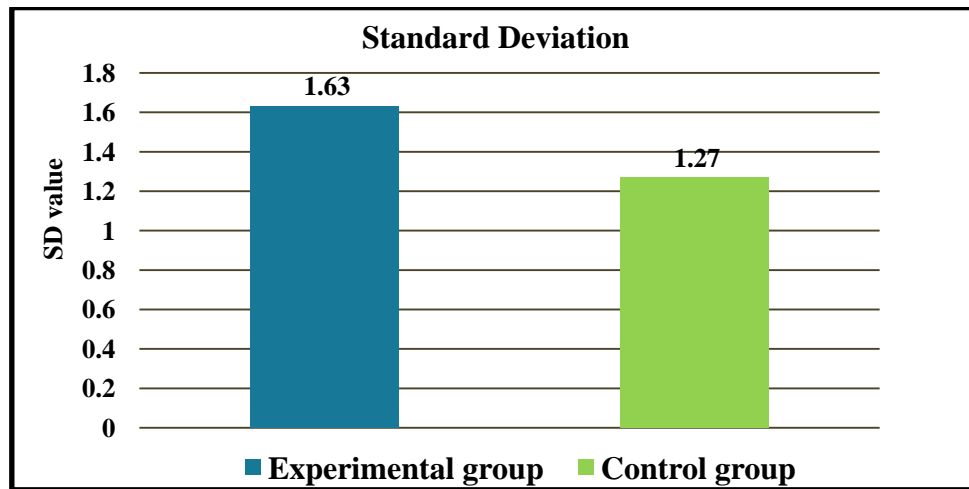
Table no. 1: Comparison between level of pain during vaccination in experimental and control group

The data presented in the table no. 1 indicates that there was statistically significant difference found in level of pain during vaccination among experimental and control group done by Mann Whitney test 6 at the p-value <0.001 level of significance.

Graph No.1: A Bar Graph Showing Mean pain value of subjects as per their pain during vaccination of experimental and control group.



Graph No.2: A Bar Graph Showing standard deviation of subjects as per their pain during vaccination of experimental and control group.



The study results showed the association between level of pain during vaccination with their demographic variables were found not significant as χ^2 calculated value is less than table value.

4. CONCLUSION

Study concluded that Helfer skin tap technique is effective in minimizing pain during vaccination among infants. It should be use in routine practices of giving immunization and intramuscular injections.

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