



A QUASI EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF BLUNT PRESSURE TECHNIQUE ON INTRAMUSCULAR INJECTION RELATED PAIN AMONG PATIENTS RECEIVING INTRAMUSCULAR INJECTION AT SELECTED HOSPITAL, COIMBATORE.

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ABSTRACT

Pain is a universal phenomenon. It is considered to be the “fifth vital sign.” Pain originating from intramuscular (IM) injection should not be underestimated, because a painful injection might incite severe fear of injection, which may delay the patient seeking medical help. Aims: This study was intended to determine the effectiveness of blunt pressure technique on pain response among subjects receiving IM injection. Settings and Design: Using Quantitative approach Quasi- experimental posttest only control group design was undertaken for 6 a period of 4 weeks at Sri Ramakrishna Hospital. All those who are receiving intramuscular injection at Sri Ramakrishna Hospital, Coimbatore. Sampling Technique Non Probability Purposive Sampling (n=60) Experimental group [30] Experimental group [30] Patients with infectious skin diseases, bleeding disorder, trauma and injury, cognitive impairment were excluded from the study. Numerical pain rating scale was used to collect the data. Statistical Analysis Used. The findings revealed that the post-test mean on level of pain among patients receiving intramuscular injection was 2.16 in the experimental group and 6.03 in the control group. The mean difference was 3.87. At the $p < 0.001$ level, the unpaired 'z' test value of 3.33 was greater than the table value of 1.96, revealing the effectiveness of the blunt pressure technique on intramuscular injection-related pain. It revealed that in the experimental group, samples had a lower level of pain than in the control group.

KEYWORDS

Effectiveness, Blunt pressure technique, Intramuscular injection related pain

INTRODUCTION

Pain is an unpleasant, subjective, sensory and emotional experience associated with actual or potential tissue damage. Administration of Intramuscular injection is one of the basic nursing skills and responsibilities of professional nurses. Intramuscular injection often causes pain and anxiety on patients and therefore patients are afraid of receiving injections and may postpone seeking medical help because of painful injection. As nurses play a crucial role in the delivery of health care, they need to embrace novel and innovative techniques to provide effective and best possible treatment to their patients. By keeping this in mind, the researcher wanted to utilize the innovative multiple Blunt Pressure technique in administration of Intramuscular Injection to minimize the pain experience of patients. According to the gate control theory, pain perception will be reduced due to interference from other physical stimuli. The physiological stimulation of the injection site by multiple Blunt Pressure will sensitize the neuron in the dorsal horn of the spinal cord and cause a reduced level of pain at the prick site of the intramuscular injection.

Need For The Study

More than 12 billion injections are administered each year worldwide. In India, a survey found that 96% of all injections given by health care providers were of antibiotics, vitamins and analgesics. 48% of patients mentioned needle injection as disturbing and 62% of patients had fear about intramuscular injection. Needle phobia affects at least 10% of the total population and it also lead to avoidance of medical care. People do not come forward to any invasive procedures because of pain which leads to greater intensity. In the modern era, as the science and technology have been impoverished for the sake of comfort of the people, it is very much necessary to control even the mild pain that causes discomfort to the people. Non- pharmacological interventions include nursing activities that can relieve pain. Blunt Pressure technique is an effective, simple, innervative, cost effective and safe do not require specific time and costly equipment during Intramuscular injection. During the clinical experience the investigator had observed that all patients experienced pain and discomfort during Intramuscular injection. Since the IM injection has an associated, negative connotation of pain, patients verbalized some fear and muscle contraction prior to receiving the injection. There are many devices which physiologically stimulate the nerve endings, thereby reducing the pain. Blunt Pressure is a Non-invasive procedure so no chance of getting infection. It is easy to use and cost effective

Statement Of The Problem

A Quasi Experimental Study to Evaluate the Effectiveness of Blunt Pressure Technique on Intramuscular Injection Related Pain Among Patients Receiving Intramuscular Injection At Selected Hospital, Coimbatore.

Objectives Of The Study

1. To assess the level of Intramuscular Injection related pain among patients receiving Intramuscular Injection.
2. To evaluate the effectiveness of Blunt Pressure technique on Intramuscular Injection related pain among patients receiving Intramuscular Injection.
3. To find out the association between level of Intramuscular Injection related pain with their selected demographic and clinical variables among patients receiving Intramuscular injection.

Operational Definition

Effectiveness

It refers to the outcome in the level of pain during Intramuscular Injection after the Blunt Pressure technique. It is measured by using Numerical Pain Rating Scale.

Blunt pressure technique

The Blunt Pressure technique refers to the method of applying Blunt Pressure by using a round disk with multiple blunt plastic pins while giving Intramuscular Injection.

Intramuscular injection related pain

An unpleasant subjective sensation experienced by the patients during Intramuscular Injection and is measured by Numerical Pain Rating Scale.

Hypothesis

H_1 : There is a significant difference in the level of pain after Blunt Pressure technique between the experimental and control group.

H_2 : There is a significant association between the level of pain with selected variables among patient receiving Intramuscular Injection.

METHODOLOGY

Research Approach:

Quantitative approach.

Research Design:

Posttest only control design.

Research Setting:

Sri Ramakrishna hospital

Target Population:

Patients receiving intramuscular injection in Coimbatore

Accessible Population:

All those who are receiving intramuscular injection at Sri

Ramakrishna Hospital, Coimbatore

Sampling Technique

Non Probability Purposive Sampling (n=60)

Sampling Size:

30 Patients who all are receiving intramuscular injection.

Inclusion criteria

- Patients who are receiving Intramuscular Injection above 18years

Exclusion criteria

Patients with,

- Skin diseases
- Bleeding disorders and coagulopathy
- Trauma and Sciatic nerve injury
- Infectious fibrosis
- Cognitive impairment

Data Collection Instrument:

Following the disinfection of skin, round plastic disc with multiple blunt pins will be placed over the subject's skin and held in place using forefinger and middle finger. Gentle 2 finger pressure will be applied over the disc for 5 seconds. Injection will be given through the middle hole created in the disc at 90° angle. The ring finger and small finger are placed over the disc. Hub of the needle will be held using forefinger and thumb. The syringe is gradually withdrawn to check whether the placement is in right place. The drug is slowly injected at the rate of 10 seconds/1cc. After the completion of injection, the hub of the needle will be held and the syringe is withdrawn. The cotton ball is pressed at the injected site. The pressure over the disc and injection site will be held for 1 min following the injection. Device is removed after 1 minute. The individual is allowed to massage the site. Post assessment of pain will be carried out.

Data Analysis And Interpretation:

Demographic and Clinical variables

(n=30)

Table 4.3.1 Assess the level of Intramuscular Injection related pain.

S.No	Demographic and clinical variables	Number Of Participants			
		Experimental group		Control group	
		Frequency	Percentage%	Frequency	Percentage%
1	Age in years				
	18-30 years	7	23	3	10
	31-50years	13	43	14	47
	51-60years	2	7	8	26
	Above 60years	8	27	5	17
2	Gender				
	Male	13	43	6	20
	Female	17	57	24	80
3	Educational status				
	Illiterate	6	20	1	3
	Primary	7	23	9	30
	secondary	4	13	6	20
	Graduate above	13	44	14	47
4	Occupation				
	Unemployed	19	63	10	33
	Skilled	5	17	13	43
	Professionals	6	20	7	24
5	Religion				
	Hindu	18	60	18	60
	Christian	10	33	11	37
	Muslim	2	7	1	3
6	Types of family				
	Joint family	19	63	23	80
	Nuclear family	11	34	7	20
7	Personal habits				
	Smoking	4	13	7	23
	Alcohol	1	3	2	7
	No personal habits	25	84	21	70

8	Diet pattern				
	Vegetarian	4	13	5	17
	Non vegetarian	26	87	25	83
9	Residence				
	Rural	9	30	13	43
	Urban	21	70	17	57
10	Consuming spicy food				
	Yes	7	23	4	13
	No	23	77	26	87
11	Body Mass Index (BMI)				
	Under weight	3	10	4	13
	Normal weight	18	60	13	43
	Over weight	8	27	8	27
	Obese	1	3	5	17
11	Volume of injection				
	0.5-1ml	10	33	8	27
	1.1-2.5ml	19	63	20	67
	2.6-5ml	1	4	2	6
12	Previous experience of Intramuscular injection				
	Yes	9	37	10	33
	No	21	63	20	67
13	Type of injection				
	Vitamin	10	33	10	33
	Analgesic	9	30	13	43
	Pre-medication	4	13	2	7
	Hormonal	7	24	5	17
14	Co morbid illness				
	Yes	11	37	7	23
	No	19	63	23	77

CONCLUSION:

Blunt Pressure is a Non-invasive procedure so no chance of getting infection. It is easy to use and cost effective. It is a simple, safe, effective and cheap independent nursing intervention that relieve the Intramuscular Injection related pain. Blunt Pressure technique is found to be effective in reducing the pain response. Nurses can embrace this innovative technique with scientific base to alleviate the procedural pain.

REFERENCES:

- DeLaune SC, Ladner PK. Fundamentals of Nursing: Standards and Practice. 3rd ed. New York: Thomson Delmar;2007
- Potter PA, Perry AG. Fundamentals of Nursing. 7th ed. St. Louis: Mosby Elsevier; 2009.
- Ozdemir L, Pınarç E, Akay BN, Akyol A. Effect of methyl prednisolone injection speed on the perception of intramuscular injection pain. Pain Manag Nurs 2013;14:3-10
- Romanò CL, Cecca E. A new method to reduce pin-prick pain of intra-muscular and subcutaneous injections. Minerva Anesthesiol 2005;71:609-15
- Yeganehkhah MR, Abedini Z, Tehrani TD. Evaluation of an applied method in reducing the pain of intramuscular injection. Qom Univ Med Sci J 2011;7:1-6.
- Melzack R, Wall PD. Pain mechanisms: A new theory. Science 1965;150:971-9