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RESEARCH ARTICLE

“A STUDY TO ASSESS THE EFFECTIVENESS OF HELPER SKIN TAP TECHNIQUE ON THE LEVEL OF PAIN REDUCTION DURING INTRA MUSCULAR INJECTION AMONG ORTHOPAEDIC PATIENT OF PANDIT DEEN DAYAL UPADHYAYA (CORONATION) GOVERNMENT HOSPITAL DEHRADUN UTTARAKHAND.”

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Key words:-

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Abstract

Pain is an unpleasant sensory and emotional feeling accompanying existing or impending tissue damages or reference to such damage. According to WHO annual report more than 16 billion IM injections are administered throughout the world.

Aim: This study is intended to determine the effectiveness of Helper skin tap technique on the level of pain reduction during IM injection among orthopedic patient of PanditDeenDayalUpadhaya (Coronation)Government Hospital, Dehradun Uttarakhand.

Methodology: An experimental approach with cross-over design was adopted for the study. The study samples were orthopedic patients who receiving IM diclofenac injection. There were 50 subjects that fulfill the inclusion and exclusion criteria are divided into two experimental groups (25 samples in each groups) by simple random sampling technique. The pain level was assessed by universal numerical pain rating scale. The pain level with the administration of intramuscular injection by Helper skin tap technique was compared with a pain level with conventional Technique.

Result: The result shows that in experimental group I majority of sample 52% perceived mild pain with Helper skin tap technique whereas with majority of samples 64% perceived moderate pain with conventional technique. The mean pain score with Helper skin tap technique was 3.88 was less than conventional technique 5.32. The obtained t value was 3.80 was significant at $p < 0.05$ level of significance. In experimental group II majority of sample 64% perceived mild pain with Helper skin tap technique whereas with majority of samples 68% perceived moderate pain with conventional technique. The mean pain score with Helper skin tap technique was 3.52 was less than conventional technique 5.16. The obtained t value was 5.479 was significant at $p < 0.05$ level of significance. In period I the mean pain score using Helper skin tap technique in experimental group I 3.88 was less than mean pain score of conventional technique in experimental group II 5.15. The obtained t value was found statistically significant at $p < 0.05$ level. In period II the mean pain score using Helper skin tap

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technique 3.52 was less than the mean pain scores of conventional technique 5.32. the obtained t value 4.5 was statistically significant at $p < 0.05$ level of significance. There was no significant association found between level of pain during intramuscular injection with selected demographic variables. The overall result shows that Helfer skin tap technique was helpful in reducing the level of pain during intramuscular injection among orthopedic patients.

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Introduction:-

Pain is a basic term that describes uncomfortable sensations in the body. It stems from activation of the nervous system. Its management is an essential part of nursing. Nursing officer have a responsibility to effectively manage patient's pain. Nursing officer play a greater role in minimizing the pain and discomfort during any invasive procedure. Procedural pain is an essential source of discomfort for hospitalized patient from which all instinctually try to escape. Intramuscular injection is one of such procedure and a common one that nursing officer frequently carried out, which causes pain and distress to the patient.^{1,2} There are different various methods used by nursing officer to reduce pain during intramuscular (IM) injection such as applying pressure, tapping the skin, giving injection to relaxed muscle, applying heat and cold. Among the different physical interventions of the most effective are application of pressure and tapping the skin before injection.³ Helfer skin tap technique developed by Ms. Joanne Keiffer BSN RN is an attempt to reduce pain in which tapping of the skin over the injection site before and during the procedure is done to relax muscle.⁴ As administration of intramuscular (IM) injection is a nursing intervention incorporating Helfer skin tap technique during intramuscular injection can reduce pain associated with the injection and enhance the comfort of the patients.

Problem Statement:

A study to assess the effectiveness of Helfer skin tap technique on the level of pain reduction during intra muscular injection among orthopaedic patient of Pandit Deen Dayal Upadhyaya (Coronation) Government Hospital Dehradun Uttarakhand.

Objectives:-

1. To assess the level of pain during IM injections using Helfer skin tap technique followed by conventional technique among orthopaedic patient in the first experiment group.
2. To assess the level of pain during IM injections using conventional technique followed by Helfer skin tap technique among orthopaedic patient in the second experimental group.
3. To compare the level of pain during IM injections among orthopaedic patient between first experimental group and second experimental group.
4. To find out the association between pain level and demographic variables (age, gender, religion, education, occupation, BMI)

Review Of Literature:-

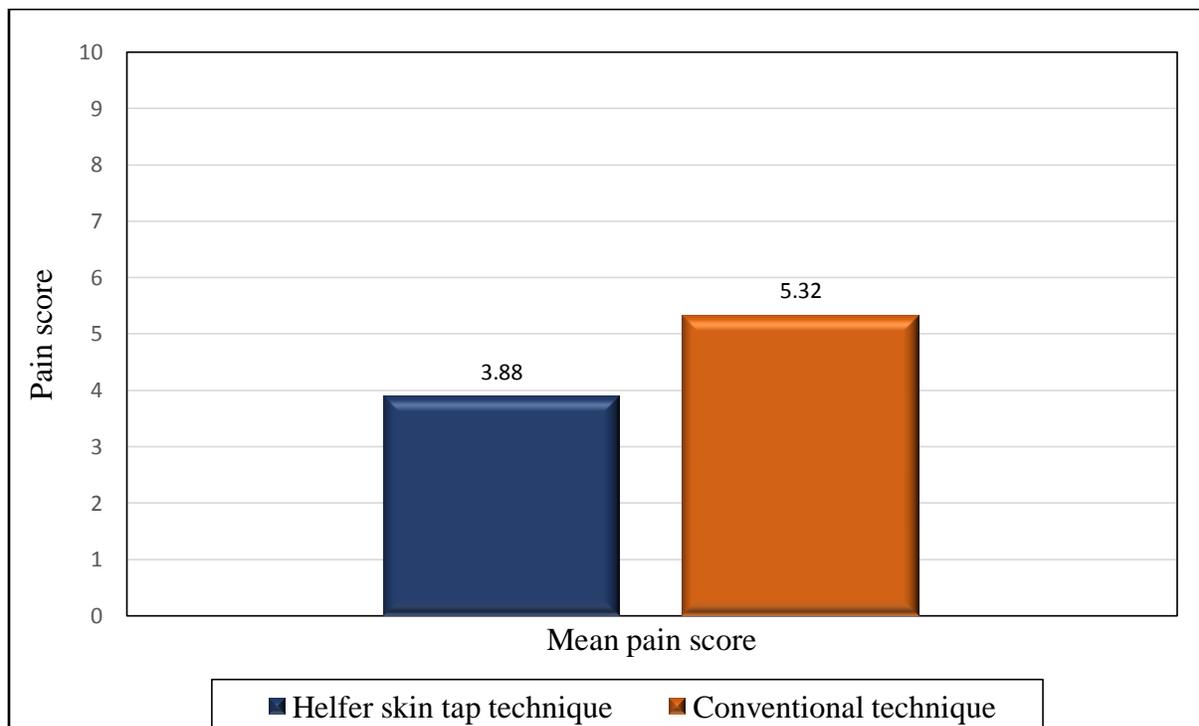
Ms. Uma Neupane, et.al January 2019 conducted quasi experimental study with post -test only design to assess the effectiveness of Helfer skin tap technique on the level of pain during intramuscular injection .The objectives of the study were to compare the level of pain during the intramuscular injection among the adults in the experimental group and control group and find out the association between pain level and selected variables of adults of the experimental and control group. The samples of the study were the 80-adult patient of in-patient and outpatient department of St. Philomena's hospital Bangalore India. Sampling technique used in this study were Purposive sampling to select the eligible population and simple random sampling is used to allocate the subjects into experiment and control group. Tool used includes numerical pain rating scale. The result of this study was that 32.5 % of the adults in the experimental group had mild pain, 67.5% perceived moderate pain during IM injection by using Helfer skin tap technique. 77.5% of the adults in the control group had moderate, 17.5% observe severe pain during IM injection by using standard technique. There is no significant difference in pain score of the adults receiving IM injection in experimental and control group $p < 0.05$. this study explored the effect of Helfer skin tap technique over the skin before and during IM injection in relation to pain.⁵

Methodology:-

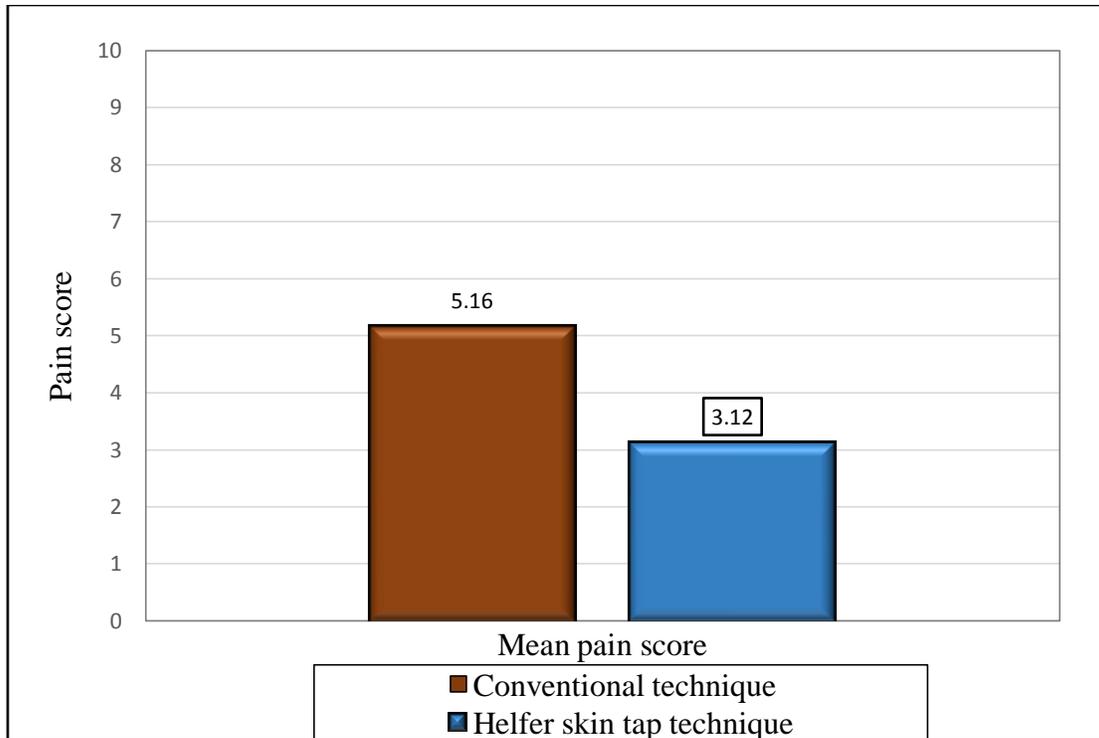
An experimental approach with cross-over design was adopted for the study . The study samples were orthopedic patients who receiving IM diclofenac injection. There were 50 subjects that fulfill the inclusion and exclusion criteria are divided into two experimental groups (25 samples in each groups) by simple random sampling technique. The pain level was assessed by universal numerical pain rating scale .The pain level with the administration of intramuscular injection by Helfer skin tap technique was compared with a pain level with conventional Technique.

Result:-

The result shows that in experimental group I majority of sample 52%perceived mild pain with Helfer skin tap technique whereas with majority of samples 64% perceived moderate pain with conventional technique. The mean pain score with Helfer skin tap technique was 3.88 was less than conventional technique 5.32.The obtained t value was 3.80 was significant at $p<0.05$ level of significance. Inexperimental group II majority of sample 64% perceived mild pain with Helfer skin tap technique whereas with majority of samples 68% perceived moderate pain with conventional technique. The mean pain score with Helfer skin tap technique was 3.52 was less than conventional technique 5.16.The obtained t value was 5.479 was significant at $p<0.05$ level of significance. In period I the mean pain score using Helfer skin tap technique in experimental group I 3.88 was less than mean pain score of conventional technique in experimental group II 5.15.the obtained t value was found statistically significant at $p<0.05$ level. In period II the mean pain score using Helfer skin tap technique 3.52 was less than the mean pain scores of conventional technique 5.32.the obtained t value 4.5 was statistically significant at $p<0.05$ level of significance. There was no significant association found between level of pain during intramuscular injection with selected demographic variables. The overall result shows that Helfer skin tap technique was helpful in reducing the level of pain during intramuscular injection among orthopedic patients.



Comparison of the mean pain scores of Helfer skin tap technique vs. conventional technique in Experimental group I



Comparison of the mean pain scores of Helfer skin tap technique vs. standard technique in Experimental group II

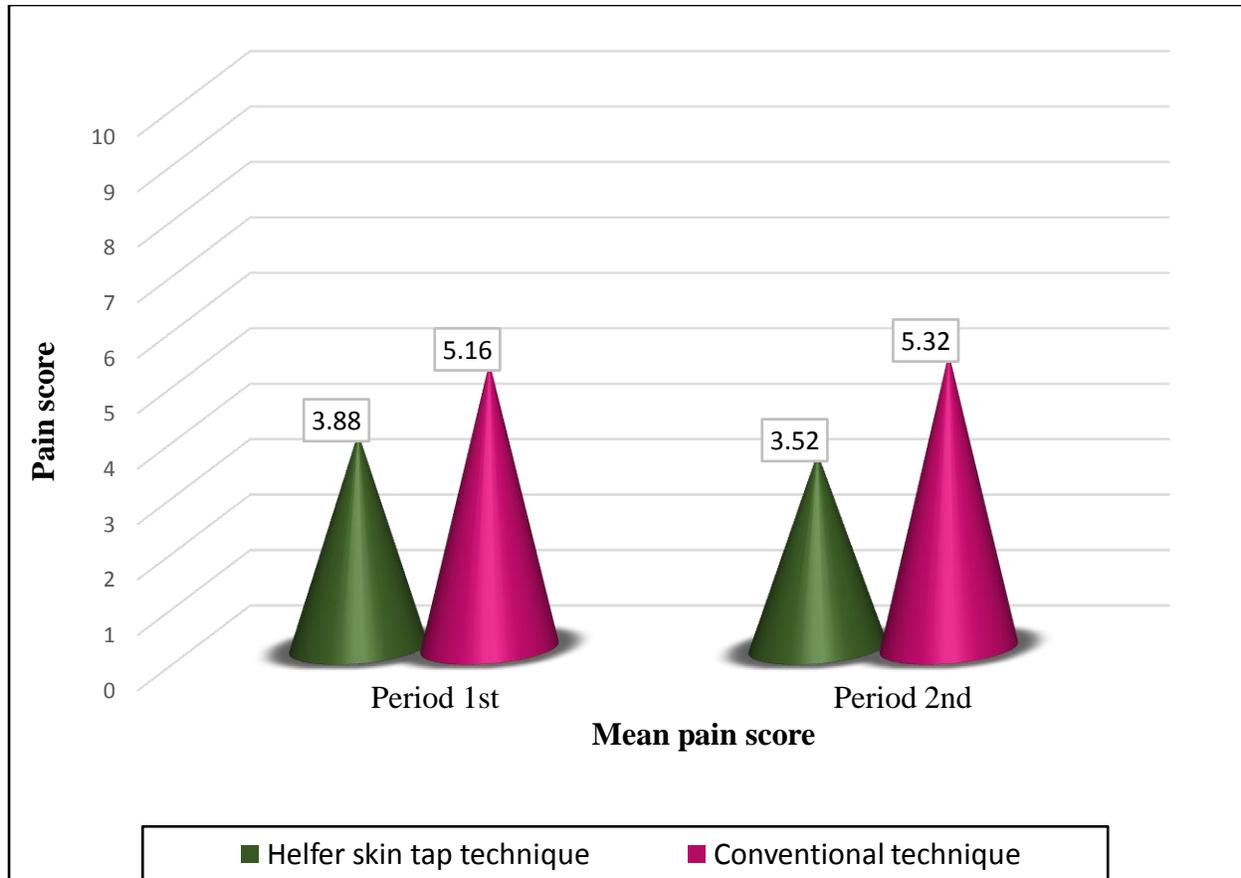
Table 1:- Comparison of the mean pain scores between experimental group I and experimental group II in Period 1st and Period 2nd

Comparison	comparison	mean	SD	Mean difference	't' value	'p' value
Period I	Helfer skin tap administration in experimental group 1	3.88	1.33292	1.28	3.483*	0.002*
	Conventional technique in experimental group 2	5.16	1.28062			
Period II	Conventional technique in experimental group 1	5.32	1.34536	1.8	4.500*	0.00*
	Helfer skin tap technique in experimental group 2	3.52	1.22882			

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* - Significant

Significant at p < 0.05 level.



Comparison of the mean pain scores between Experimental group I and Experimental group II in Period 1st and Period 2nd

Recommendations:-

1. Replication of the study in larger sample in different setting and different population with limited influence of extraneous variables like type of medication in order to validate the findings and make generalizations.
2. Further research on effectiveness of helper skin tap technique on im pain can be undertaken which will further add strength to the evidence-based findings.
3. Both the technique can be tried in same samples to avoid error because of pain perceptions among different individuals

Conclusion:-

Finding of the study is help to determine the effect of Helfer skin tap techniques in reducing pain during IM injection. This technique can be implemented by the health personnel while administering injection.

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