Research Article

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Effectiveness of cold application on level of pain preception before intramuscular injection among the patient attending the injection OPD

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ABSTRACT

The purpose of the study effectiveness of ice cube application before intramuscular injections among adults at Primary Health Centre Nemam. Ice cube application before intra muscular injection was assessed by Numerical Rating scale is pain assessment scale. Purposive sampling technique was used to select the samples. The permission to conduct research in Primary Health Centre, Nemam was obtained from concerned authorities. The ethical approval was obtained. The A total of 60 samples who met the inclusion criteria were included in the study. The eligible participants were identified and selected 30 samples were selected in descriptive study. The purpose of the study and their right to participate from the study were explained to the clients and got informed consent. Such consenting adults who fulfill in inclusion criteria were enrolled for the study. Demographic variable were collected by using interview technique. Ethical principles were adhered throughout the study. After selecting the sample the investigator introduced her self &explained the purpose of the study to the clients. For the experimental group effectiveness of using the icecubes on level of pain reducing during intramuscular injections.The study findings revealed that ice cube application was effective in reducing pain before intramuscular injection among adults in experimental group.

Keywords: Cold application, Pain perception, Intra muscular injection.

INTRODUCTION

According to **WHO** health is a state of complete physical, mental & social well being & not merely absence of disease and infirmity. Some would consider it idealistic and non realistic, as this definition categorise influenced by the well being and experience of comfort. Individuals get hospitalized for a wide range of acute illness and injuries [1].

Medications have been administered by Intramuscular injections for more than a century. This route administration is most used and preferred, particularly when the medications are administered in small amount like codeine,

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morphine, gentamicin, prednisone, diclofenac, paracetamol etc.

Pain management is one of the main facts of nursing care, where nurses need to be competent. Nurses are obligated to mitigate every kind of pain, even the "minor'' procedure pain. Undoubtedly, procedural pain is an important source of discomfort of hospitalized patients from which all instinctively try to escape.10% of adults in the United States have needs phobia [2].

Pain management strategy must be identified to promote optimal pain relief. Ways to manage the client's pain any be pharmacologic or non pharmacologic including physical and behavioural measures such as touch, message, application of heat and cold, aroma therapy; acupressure, relaxation, hypnosis, distraction etc are proved effective in reducing pain [3].

Ice is a therapeutic agent used in medicine as an integral part of injury treatment and rehabilitation. The use of ice pack is widespread because of their effectiveness, convenience, low cost and case of transportation. Ice packs can be made with many form of Ice; however 2 commonly used forms are cubed ice and crushed ice. Ice is believed to help control pain by inducing local anaesthesia around the treatment area. Investigators have also shown that it decreases oedema, nerve conduction velocities, cellular metabolism, and local blood flow.

A simple and inexpensive therapy, cold application has been accepted for decades an effective non pharmacologic intervention for pain management. Several studies have shown ice to be effective I pain management associated with orthopaedic procedures. Studies have been shown ice to be ineffective in pain associated with abdominal procedures.

Lehman J F (1982) describes the effect of therapeutic cold in the treatment. A direct effect conduction of pain receptor and neurons, reducing the velocity and number of impulses is one way of alleviating the pain. It is evident that latter effect would only occur in the temperature were reduced.

OBJECTIVES

- To assess the post-test level of pain associated with intra muscular Injection among adults in experimental and control group.
- To evaluate the effectiveness of cold application on level of pain associated with intra muscular injection among adults s in experimental group and control group.
- To determine the association between the levels of pain associated with intramuscular injection among adults with their selected demographic variables in experimental and control group.

MATERIALS AND METHODS

Permission was obtained from concerned authorities from the Primary Health Centre, Nemam branch. The ethical approval was obtained. The data was collected for a period of three weeks in the Primary Health Centre, Nemam. The injection block is having separate room. A total of 60 samples who met the inclusion criteria were included in the study. The eligible participants were identified and selected 30 samples were selected. The purpose of the study and their right to participate in the study were explained to the clients and got informed consent. Such consenting adults who fulfil in inclusion criteria were enrolled for the study. Demographic variable were collected by using interview technique. Ethical principles were adhered throughout the study. After selecting the sample the investigator introduced her self to the clients and developed a good rapport with them and explained the purpose of the study to the clients. For the experimental group the ice cubes application was done to reduce the level of pain during intramuscular injections.

RESULT

Section 1: Distribution of socio – demographic variables of adults in experimental group and control group

Section 2: Evaluation of the effectiveness of the ice cube application for reducing level of pain reducing during intramuscular injections**.**

Section 3: Association between the level pain perception with the selected demographic variables of post test.

Section –i Frequency and percentage distribution of demographic variables of adults in experimental group and control group Primary health centre.

Table: 1 Frequency Distribution Table

SI:NO	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP	PERCENTAGE	CONTROL GROUP	PERCENTAGE
		NO	%	NO	%
1	**AGE**				
	A . 25 - 45	07	23%	21	70%
	B. 45 - 55	07	23%	07	23%
	C . 55 - 65	16	53%	02	6%
2	**SEX**				
	A. male	16	53%	15	50%
	B. female	14	46%	15	50%
3	**BMI**				
	A. 18<	07	23%	04	13%
	B. 19-25	11	36%	20	66%20%
	C. < 25	12	40%	06	
4	**EDUCATION**				
	A . nil	14	46%	-	-
	B. primary school	13	43%	09	30%
	C. Higher	03	10%	21	70%
	D. Secondary	–	–	–	–
5	**PAST EXPERIENCE**				
	A. yes				
	B. No	25	83%	23	76%
		05	16%	07	23%
6	**PART OF INJECTION**				
	A. Dorsoglutial	30	100%	30	100%
	B. Deltoid	–	–	–	–
	C. Ventroglutial	–	–	–	–
	D. Vastuslatraus	–	–	–	–

SECTION -2

Table: 2 Evaluation of the effectiveness of using ice cube application on level of pain reducing during intramuscular injections.

	GROUP STATISTICS			
GROUP	**NO**	**MEAN**	**S.D**	**t value**
Experimental group	30	3.96	742.31	668.20
Control group	30	7.36	1	5.477

The above table shows that there was a reduction in level of the pain after ice cube application before intramuscular injections for adults.

SECTION – 3

Table: 3 Association between the level pain perceptions with the selected demographic variables of post test.

EXPERIMENTAL GROUP								
DEMOGRAPHIC VARIABLES		**MILD PAIN**		**MODERATE PAIN**		**SEVERE PAIN**		**CHI SQUAL VALUE**
		NO	**%**	**NO**	**%**	**NO**	**%**	
AGE	25-45	3	10%	4	13.3%	0	-	0.5001
	45-55	1	3.3%	6	20%	0	-	NS
	55-65	5	16.6%	11	36.6%	0	-	
SEX	MALE	3	10%	20	66%	0	-	0.0002
	FEMALE	6	20%	1	3.3%	0	-	**S**
BMI	18>	I	3.3%	6	20%	0	-	0.9094
	19-25	1	3.3%	10	33.3%	0	-	NS
	<25	1	3.3%	11	36.6%	0	-	
EDUCATION	NIL	4	13.3%	10	33.3%	0	-	0.9836
	PRIMARY	4	13.3%	9	30%	0	-	NS
	HIGHER	1	3.3%	2	6.6%	0	-	
	SECONDRY	-	-	-	-	-	-	
PAST	YES	8	26.6%	17	56.6%	0	-	0.5930
EXPERIENCE	NO	1	3.3%	4	13.3%	0	-	NS
PART OF	DORSOGLOTIAL	9	30%	21	70%	0	-	0
INJECTION	DELTOID	-	-	-	-	0	-	
	VENTRO GLOTIAL	-	-	-	-	0	-	
	VASOTOTARAL	-	-	-	-	0	-	

The above table shows that there is an association between the part of injection and level of pain perception among experimental group.

Figure.1

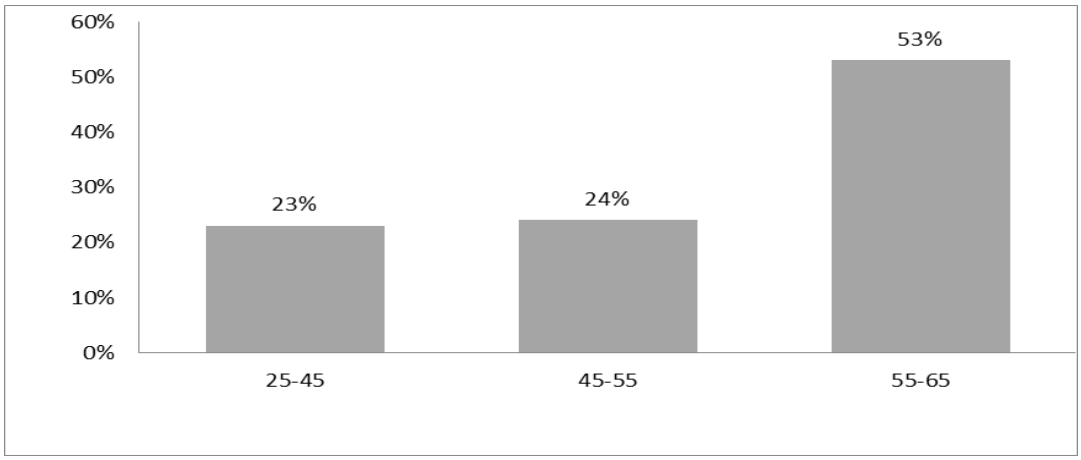

Figure I showed that about 23% are 25-45 age group, 24% are 45-55 age group and 53% 55-65 age group the majority of the sample were 55-65 age group (53%)

Figure 2

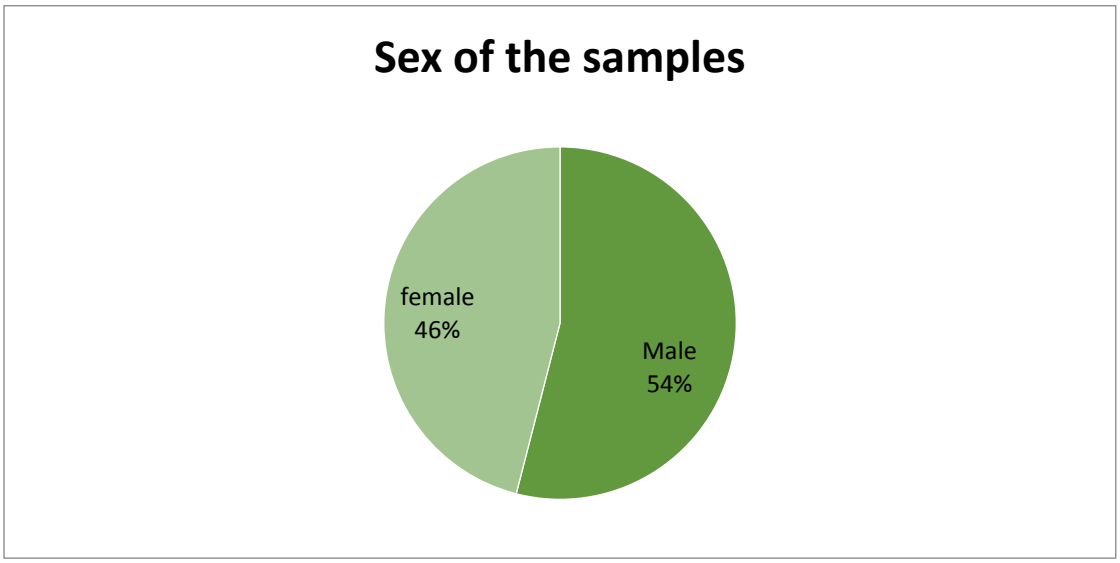

Figure 2 I showed that about 54% are male and 46% are female the majority of the sample were females (54%)

Figure 3

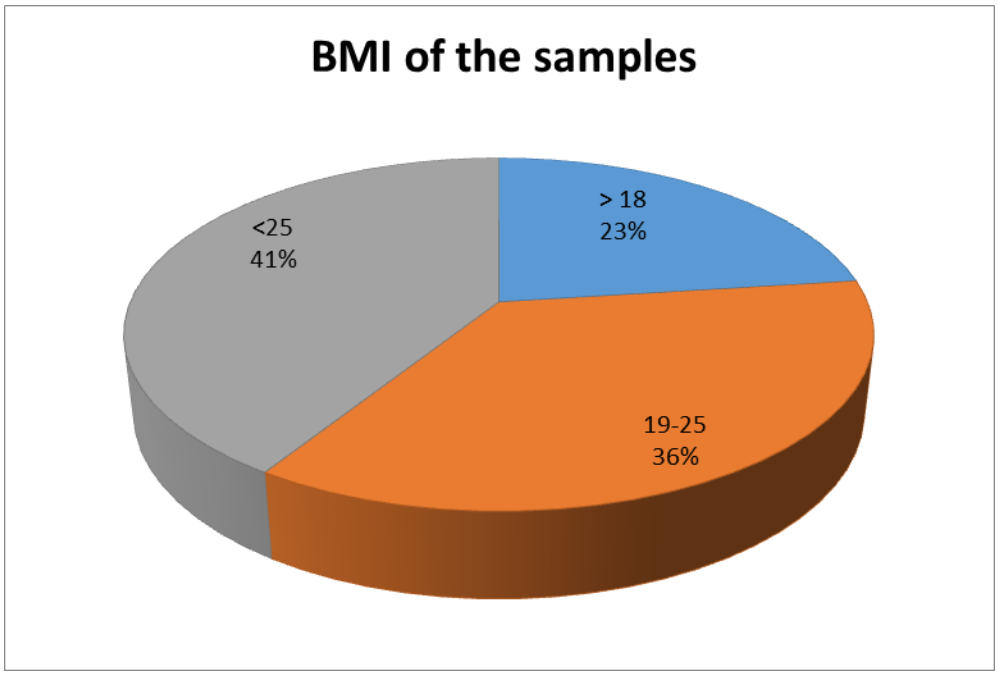

Figure 3 showed that majority of the people had BMI > 18 are 23 %, BMI 19-25 are 36 %, BMI <25 are 41 % the majority of the sample were BMI < 25 (41%)

DISCUSSION

The purpose of the study effectiveness of ice cube application before intramuscular injections among adults at Primary Health Centre Nemam. The conceptual model of this study was based on modified of Emetinic Widenbach's helping art of clinical nursing theory. A descriptive design was

used to conduct the study. Ice cube application before intra muscular injection was assessed by Numerical Rating scale is pain assessment scale. Purposive sampling technique was used to select the samples.

Descriptive statistics (frequency, percentage, mean, standard deviation) was used to analyze the data and test the hypothesis.table:1revealed that about 30% of adults experienced mild pain in the experiment group. Table:2 vrevealed that the independent '1' test value of level of pain in post experimental group the ice cube application before IM injection after reduced the pain in adults.table:3 Revealed that the association between the selected demographic variable with the ice cube application before intramuscular injection using among experimental group it was statistically found that the selected demographic such as age, sex, BMI, education, part experience, part of injection. There is a significant association between experimental group and control group pain levels.

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