WWJMRD 2020; 6(4): 5-7
www.wwjmrd.com
International Journal
Peer Reviewed Journal
Refereed Journal
Indexed Journal
Impact Factor MJIF: 4.25
E-ISSN: 2454-6615

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A Study to Assess the Effectiveness of Kaleidoscope on Pain during Intravenous Cannulation among Children between 4-10 Years in Selected Hospitals in Malappuram District

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Abstract
The present study was to assess the effectiveness of kaleidoscope on pain during Intravenous cannulation among children between 4-10 years in selected hospitals in Malappuram district"

Objectives: Assess the level of pain during IV cannulation among the experimental and control group. Evaluate the effectiveness of kaleidoscope usage on pain during IV cannulation among experimental group.

Methodology: A quantitative evaluative approach was adopted for the study.Quasi experimental posttest only design was used. Data was collected from 30 samples in government hospital Perinthalmanna and Ramdas hospital Perinthalmanna. The sample was selected using convenience sampling technique. The tool used for data collection is Wong Baker pain scale and demographic data.The pilot study was conducted among 10 samples to determine the feasibility of the study. The data was analysed and interpreted using descriptive and inferential statistics.

Result and interpretation: The study showed that 60% of experimental group and 13% of control group have moderate pain (2-6), 40% of experimental group and 87% of control group have severe pain (6-10). t test value is 3.0286 and the tabulated value is 2.05. Hence calculated value greater than table value we reject H0 and accept H1.

Conclusion: The study has assessed the effectiveness of kaleidoscope on pain during Intravenous cannulation among children between 4-10 years in selected hospitals. The following conclusion were made based on findings of study:About 60% (9) and least samples 13% (2) had moderate pain in experimental and control group respectively, less than 50% (6) and most samples that is 87% (13) had severe pain in experimental and control group respectively.

Keywords: Children, kaleidoscope, pain, IV cannulation.

1.1 Introduction

According to global estimation of the children population it revealed that there are 30.2% of total population consists of children this will increase to 50% by 2050. Children in Asia are also expected to increase from 2 million in 2003 to 7 million in 2050. The children are getting admitted with various conditions. The prevalence of children presenting with abdominal pain of less than or equal to 3 days duration was 5.1%. The most common associated symptoms were headache 29.5% and sore throat 27%, abdominal pain of 15.6%. Approximately 7% of children returned within 10 days for reevaluation of their illness and for diseases requiring surgical intervention. Every child will experience pain at one time or another, weather it is from every day due to any chronic conditions such as head ache, gastrointestinal problem also due to hospital invasive procedures like intra venous cannulation, blood sampling, injections etc.

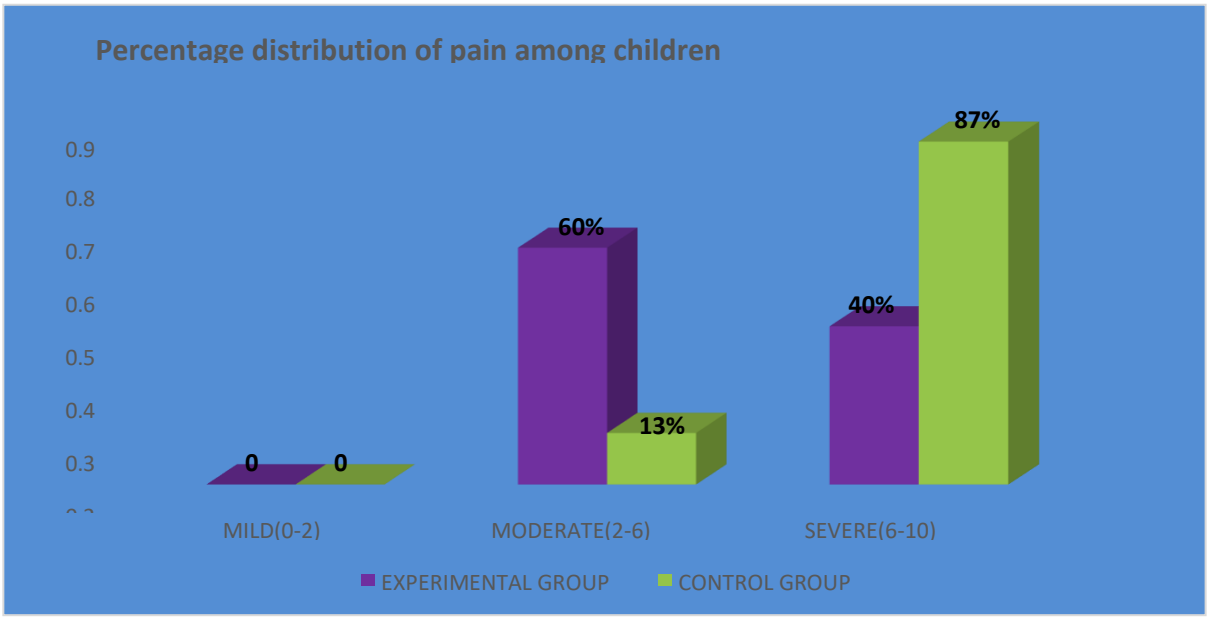
Materials and Methods:
The study is quantitative evaluative approach. The research design of the study is quasi experimental post-test only design. The research design of the study is quasi experimental post-test only design. Objectives of study was to assess the level of pain during IV cannulation among the experimental and control group. Evaluate the effectiveness of kaleidoscope usage on pain during IV cannulation among experimental group.

Ethical Clearance
Informed consent was obtained from the concerned officials of selected hospitals. Informed consent will be obtained from parents and children. Privacy and confidentiality were guarded scientific objectivity of the study was to be maintained with honesty and impartiality.

Procedure of Data Collection
Pilot study was done at a private Super specialty hospital. pilot study was conducted on 10 samples, 5 in each control and experimental group. The pilot study showed that the study is feasible and we further moved on to our main study. A formal written permission will be secured from the officials of the selected hospital. An informed consent will be obtained from the children and their parents after explaining the nature of the study. Convenience sampling technique will be used to select the sample. 30 samples will be selected, in which 15 samples will be considered as control group and 15 samples will be considered as experimental group. Keledoscope was given to the children 15 minutes before venipuncture. Pain score was assessed by wong Becker facial pain scale for both experimental and control group.

Result and Interpretation
Section A consist of, Demographic data like Regarding the age, About 26% (4) and less than 50% (7) belongs to the age group of 4-6 years in experimental and control group respectively, less than 50% (7) and least samples that is 20% (3) of samples are between the age group of 6-8 years in experimental group and control group respectively, about 27% (4) and about 33% (5) of samples belongs to the age group of 8-10 years in experimental and control group respectively. With respect to the gender: More than 50% (8) and less than 50% (6) belongs to male in experimental and control group respectively, less than 50% (7) and most samples that is 60% (9) belongs to females in experimental and control groups respectively. Regarding the previous cannulation. More than 50% (8) of samples belongs to children who have undergone previous cannulation in both experimental and control group, less than 50% (7) of samples belongs to children who have not undergone previous cannulation in both experimental and control group. With respect to birth order, More than 50% of samples (8) belongs to first child in both experimental and control group, about 20 % (4) and 27% (3) of samples belongs to second child in experimental and control group respectively, least samples that is 27% (4) and 20% (3) of samples belongs to third child in experimental and control group respectively. Regarding the relationship with the child: Most samples that is 60% (9) and less than 50% (7) of samples came with mother in experimental and control group respectively, about 20% (3) and less than 50% (6) of sample came with father in experimental and control group respectively, about 20% (3) and least sample 13% (2) came with siblings in experimental and control group respectively.

Section B consist of Assessment of pain during IV cannulation among experimental and control group.



About 60% (9) and least samples 13% (2) had moderate pain in experimental and control group respectively, less than 50% (6) and most samples that is 87% (13) had severe pain in experimental and control group respectively.
Section C consist of Effectiveness of kaleidoscope on pain during IV cannnulation among children.

Group	Mean	Standard Deviation	T test value	Tabulated value
Experimental	5.2	1.0456	3.0286	2.05
Control	6.8	1.7588		

- t test value is 3.0286 and the tabulated value is 2.05. Hence calculated value greater than table value we reject H0 and accept H1.

Discussion

Purpose of the study was to assess the effectiveness of kaleidoscope on pain during Intravenous cannulation among children between 4-10 years in selected hospitals. The sample size was 30 (15-experimental and 15-control group) children. A quasi-experimental post-test only design was adapted to conduct the study. The data was collected from 30 sample by using Wong Baker pain scale score. In this study we have to find the effectiveness of kaleidoscope in pain reduction during IV cannulation.

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