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Effectiveness of kaleidoscope in reducing pain during venipuncture procedure among hospitalized pre-school children at Udaipur (RAJ).

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Abstract:
Background*: Pain is an unpleasant sensory and emotional experience associated with actual and potential damage. Children admitted to hospital often experience pain from various treatments and test, as well as from illness itself. The most common invasive nursing procedure is insertion of an intravenous catheter which has a long track record of being painful, stressful for the patients. In an effort to promote comfort during intravenous cannulation, nurses may use various techniques to reduce the discomfort of the patient. Among the various methods of pain management, relief of pain is basic need and right of all the people. Distraction has shown to be an effective non pharmacological pain management technique. Effective distraction technique may reduce pain through its distraction process Distraction is a hypothesized effective strategy for decreasing procedural pain, fear, and distress among children by reducing the sensory and effective component of pain. Researcher conducted A study to assess the effectiveness of kaleidoscope in reducing pain during venipuncture procedure among hospitalized pre-school children in selected hospital of udaipur, Rajasthan.*
Materials and methods: *It included the Quasi experimental research approach, post-test only design,(stenley,1966) variables under study were kaleidoscope as independent variable, reducing pain among hospitalized preschool children as dependent variable. Research used modified conceptual framework based On Ernestine wiedenbach's helping art of clinical nursing model (1964). Selected Hospital of Udaipur city as research setting, total 60 samples, and non-probability convenient sampling techniques was used. The instrument used for this study was kaleidoscope and tool used for data collection were socio-demographic data and flacc pain scale. The data obtained were analyzed and interpreted in the light of objectives and hypothesis using both descriptive and inferential statistical in terms of frequency, percentage and chi-square.*
Results: *Result revealed that calculated t value (16.08) is found highly significant at the level of P=0.001.it shows there is significant relationship between effect of kaleidoscope and pain score among pre-school children undergone venipuncture procedure. Hence research hypothesis H_1 is proved and accepted. In experimental group age in years(χ^2=17.18), duration of hospitalization(χ^2=11.36), Any previous exposure to venipuncture procedure(χ^2=19.22), parents are allow with the child during venipuncture procedure(χ^2=24.02) found significant (P=0.05). where as In control group age in years(χ^2=11.36), duration of hospitalization(χ^2=18.36), Any previous exposure to venipuncture procedure(χ^2=23.95),parents are allow with the child during venipuncture procedure(χ^2=16.86) found significant(P=0.05). So there is a significant association between the pain and selected socio-demographic variables of hospitalized pre-school children undergoing venipuncture procedure. Hence Research hypothesis H_2 is accepted.*
Conclusion: *The main focus of the study was to assess the effectiveness of kaleidoscope in reducing pain during venipuncture procedure among hospitalized preschool children. The mean post test score for pain among experimental group Mean=3.4was lower than the mean post test pain score for the control group Mean=7.3and the calculated 't' value is t= 16.8 greater than the table value. The finding shows that kaleidoscope was effective in reducing pain among pre-school children undergone venipuncture procedure. Hence, research hypothesis H_1 accepted.*
Key Words*: kaleidoscope, venipuncture procedure, effectiveness, hospitalized pre-school children.*

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I. Introduction

Child is a stages between birth to puberty. children generally have fewer rights and less responsibility than adults. Today's children will be adults of tomorrow.[1] their quality and personality will determine the kind of destiny that guides the nation. children are one third of our population and all of our future.

Global Health Observatory (2016) stated that children contribute to one third of the global population and they are the basic resource for the future mankind. Children are vulnerable to all kinds of illness. This vulnerability is mainly due to immature development of physical, intellectual and immune system, and they often get hospitalized due to their vulnerability. A children that faces hospitalization is no exception. The International Association for the Study of Pain stated that pain is an unpleasant sensory and emotional experience associated with actual and potential damage. Children admitted to hospital often experience pain from various treatments and test, as well as from illness itself.

The most common invasive nursing procedure is insertion of an intravenous catheter which has a long track record of being painful, stressful for the patients. In an effort to promote comfort during intravenous cannulation, nurses may use various techniques to reduce the discomfort of the patient.[5] Among the various methods of pain management, relief of pain is basic need and right of all the people. Distraction has shown to be an effective non pharmacological pain management technique.

Carol Taylor (2016) described that the reticular activating system inhibits painful stimuli when a child receives sufficient or excessive sensory input like distraction. Distraction is a pleasurable stimuli causes the release of endorphins, the natural opioid Neuro-modulators present in the brain and in the spinal cord. These modulators bind to specific Opioid receptor sites throughout the nervous system and it block the release or production of pain transmitting substances and there by modulates the pain perception.

II. Materials and Methods

Quasi-experimental approach, a sub type of quantitative approach was used for the present study. This approach would help the researcher to evaluate the effect of specific intervention that is "kaleidoscope" on the variable' regarding pain among hospitalized pre-school children in selected hospital at Udaipur , Rajasthan.

Research design - Quasi experimental, post-test only design(stenly,1966)

Research Settings: The study was conducted in the pediatric Medical ward in Geetanjali, Bhandari and jivanta Childrens hospital Udaipur Rajasthan.

Study duration: 06/03/2020 -30/04/2020

Sample Size: 60 hospitalized pre-school children.

Population: The target Accessible population comprised of all hospitalized preschool children In this present study the sample consisted of 60 children,30 each in the experimental group and control group, between 3-6 years who admitted in the pediatric medical ward with complain of fever and are undergoing for venipuncture during the period of data collection.

Sampling Technique: Non-Probability convenient sampling technique.

Inclusion criteria: -Children

Who were in age group of 3-6 years.

Undergoing venipuncture procedure.

Whose parents had given consent to participate in this study.

Exclusion criteria: -

Visually handicapped children.

Children who were not able to follow the instruction or children not cooperative.

Procedure Methodology: Researcher obtained informed written consent from the parents of study participant, confidentiality of the study subject was assured. Researcher administered socio-demographic Performa which contain 6 items. The average time taken by study participants was 2 minute. In experimental group researcher administered intervention that is kaleidoscope 2 minute before venipuncture procedure. During the time of venipuncture procedure researcher administered FLACC scale. the average time taken by administration of tool and scoring was 1 minute. No participants was dropped out from the main study.

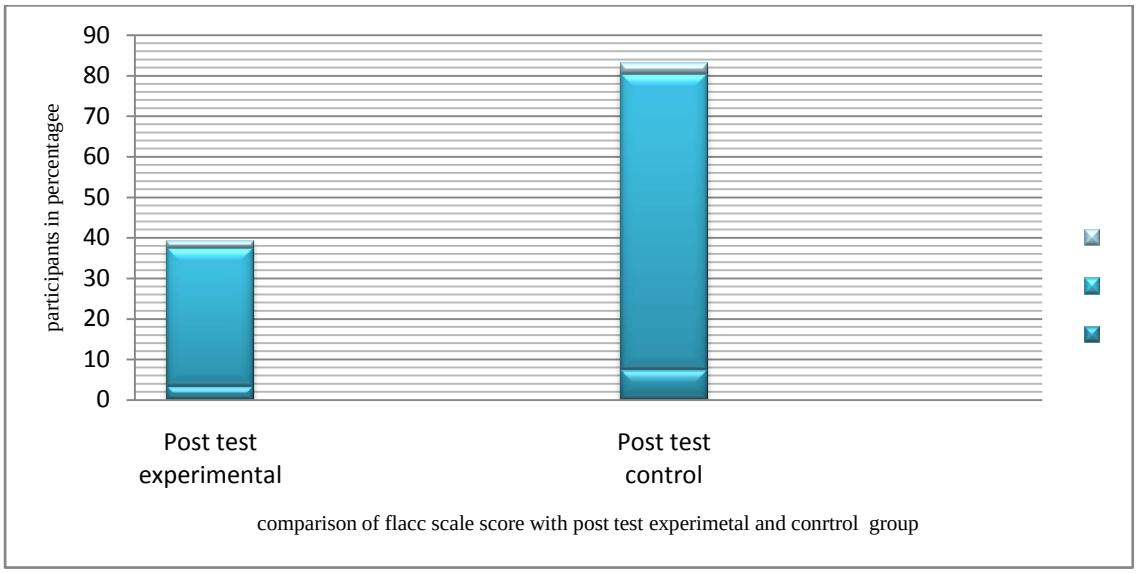
Statistical analysis: The obtained data were analyzed in terms of objectives of the study using descriptive and inferential statistics. The plan for data analysis was as follows Organization of data in master sheet.Obtained data were analyzed in terms of frequencies and percentages. Description Statistics: Description of demographic characteristics .Mean, median, SD and mean percentage is used to describe the area wise post-test experimental and post-test control of the respondent regarding pain. Inferential Statistics:'t' test is used to find out the effectiveness of kaleidoscope comparing post test experimental and post-test control group. Chi-square is used to find the association between the post-test pain score with socio-demographic variables.

III. Results

The mean post test score for pain among experimental group Mean=3.4was lower than the mean post test pain score for the control group Mean=7.3and the obtained 't' value was t= 16.8 greater than the table value. The finding shows that kaleidoscope was effective in reducing pain among pre-school children undergone venipuncture Procedure. Hence ,Research hypothesis H_1 accepted.

Table no 1 Comparison of FLACC Scale Score With Experimental and Control Group - N=60

	Mean	Mean Percentage (%)	SD	Enhancement	Enhancement percentage (%)	Df	t-value (p value)	Inference
Post test experimental	3.4	34.00	1.74	3.9	53.42%	58	0.001 t =16.08	S
Post test control	7.3	73.00	2.62					



comparison of flacc scale score with post test experimetal and conrtrol group

IV. Discussion

The present study has been undertaken to "A study to assess the effectiveness of kaleidoscope in reducing pain during venipuncture procedure among hospitalized pre- school children at selected hospitals of Udaipur Rajasthan. The First Objective was to To assess the level of pain among hospitalized pre-school children during venipuncture procedure. The present study revealed that the post test mean score for the control group on pain level is 4.3 and the behavioral response mean score is 8.6.

Cordoni. A, Cordoni. L. E (2015) conducted a double blind placebo controlled trial was conducted among 26 males and 31 female patients aged between 4-12 years who received eutectic mixture of local anesthetics to reduce pain during IV cannulization. 29 patients provide with placebo and 28 patients with EMLA cream provided 45 minutes before. Visual analogue scale was used. EMLA mean pain score (1.25) experienced less pain than those with placebo mean score (8.39)

The Second Objective is Evaluate the effectiveness of kaleidoscope in reducing pain among hospitalized pre-school children with venipuncture procedure. The mean post test score for pain among experimental group Mean=3.4was lower than the mean post test pain score for the control group Mean=7.3and the calculated 't' value is t= 16.8 greater than the table value. The finding shows that kaleidoscope was effective in reducing pain among pre-school children undergone venipuncture procedure.

Shalini. D. Souza (2015) conducted a study to assess the effectiveness of viewing kaleidoscope on bio-physiological parameters among hospitalized children subjected to IV cannulation. 60 children were divided as experimental and control group. Experimental group was distracted with kaleidoscope and control group had given no distraction. FLACC behavioral scale was used. The findings revealed that experimental group showed less bio-physiological changes when compared to control group.

The Third Objective is to find out association between pain score with selected socio- demographic variables. In experimental group age in years(χ^2=17.18), duration of hospitalization(χ^2=11.36), Any previous exposure to venipuncture procedure(χ^2=19.22), Whether parents are allow with the child during venipuncture procedure(χ^2=24.02) found significant (P=0.05). where as In control group age in years(χ^2=11.36), duration of hospitalization(χ^2=18.36), Any previous exposure to venipuncture procedure(χ^2=23.95), Whether parents are allow with the child during venipuncture procedure(χ^2=16.86) found significant(P=0.05).

V. Conclusion

The main focus of the study was to assess the effectiveness of kaleidoscope in reducing pain during venipuncture procedure among hospitalized preschool children. The mean post test score for pain among experimental group Mean=3.4was lower than the mean post test pain score for the control group Mean=7.3and the calculated 't' value is t= 16.8 greater than the table value. The finding showed that kaleidoscope was effective in reducing pain among pre-school children undergone venipuncture procedure. Hence, research hypothesis H_1 accepted.

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