Original Research Paper

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Nursing

EFFECTIVENESS OF BUBBLE POPPING ON LEVEL OF PAIN AMONG TODDLER WHILE IMMUNIZATION AT SELECTED ANGANWADI OF DADRA AND NAGAR HAVELI.

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ABSTRACT

Background Of The Study: Immunization is considered as one of the most significant medical achievement and immunization process is one of the most frequent and painful procedures performed on children worldwide.[1] There are many diversional therapies available for children during painful procedures like the bubble popping, use of cartoons, computer and imagination. Bubble popping able to hold the attention of the child for some time because it involves the activity of engaging the child.[2] **Aim:** To assess effectiveness of bubble popping on level of pain among toddler while immunization at selected Anganwadi of Dadra and Nagar Haveli." **Objectives:**

- To assess the level of pain while immunization among toddlers in experimental group and control group.
- To compare the level of pain while immunization among toddlers of experimental group and control group.
- To associate the significant relationship between level of pain and selected demographic variable in experimental group and control group

Method: Toddler from the selected Anganwadi were assigned to experimental group (30) and control group (30) by purposive sampling technique. FLACC behavioural pain scale was used to assess the level of pain while immunization among experimental and control group of toddlers. **Result:** The finding of study revealed that the majority 53.33% age group of 13-16 months,63% were male participated,43.33% of mother had secondary level of education , previous history of hospitalization 80% of toddler had previous history of hospitalization, 96.67% were from urban residence, 100% toddler had previous experience of vaccination, 83.33% mother were caregiver during vaccination.A study shows that 20% of children had moderate pain and 80% children had severe pain for control group and for experimental group 6.7% of children had no pain, 23.3% of children had mild pain,63.3% of children had moderate pain and 6.7% of children had severe pain. The research hypothesis H_1 accepted. Therefore, it is inferred Bubble Popping is effective on level of pain while immunization among toddler.

KEYWORDS : Pain, Bubble Popping, Toddler, Immunization.

INTRODUCTION:

Injections for immunization, the most common source of iatrogenic pain in childhood are administered repeatedly to almost all Indian children throughout infancy, childhood and adolescence. About 10% of the population avoids vaccination and other needle procedures because of needle fears.[3]There are many non-pharmacological pain management therapies available for children during painful procedures like the bubble popping, use of cartoons, diversional therapy using computer, imagination. [4]

Diversional therapy is now a days getting more popularity because of feasibility for every setting as far as the side effects, preparation & cost is concerned. In Australia, Diversional Therapy "is a client centred practice recognises that leisure and recreational experiences are the right of all individuals." The act of popping bubbles can evoke nostalgia and a sense of joy.[5]

NEED OF THE STUDY:

Pain from vaccine injections is common and concerns about pain contribute to vaccine hesitancy across the lifespan. Injection-related pain and fear are common adverse reactions in children undergoing vaccination and influence vaccine acceptance. Hospitalized children often describe needle-related procedures as the worst pain possible and such procedures may be emotionally traumatic.[6] The researcher selects this as it can able to hold the attention of the child for some time because it involves the activity of engaging the child.[7]

In Dadra and Nagar Haveli, there are approximately 13,000 toddlers, with 600 toddlers residing in Bavisa Faliya. Dadra and Nagar Haveli have a significant rural and tribal population. There is a lack of research on pain management and diversional therapy in Dadra Nagar Haveli.[8]

OBJECTIVES:

- To assess the level of pain while immunization among toddlers in experimental group and control group.
- To compare the level of pain while immunization among toddlers of experimental group and control group.
- To associate the significant relationship between level of pain and selected demographic variable in experimental group and control group

OPERATIONAL DEFINITION:

Bubble popping: A term bubble popping refers to a busting the bubble pop while immunization which will help to reduce the level of pain which was measure by FLACC Scale.

Toddler Children: It refers to toddler (13-24months) going for immunization at selected Anganwadi of Dadra and Nagar Haveli for immunization.

Pain: In this study a pain refers to an unpleasant sensory and emotional experience while immunization in selected sample for research study which was measure by FLACC scale.

Immunization: In this study immunization of intramuscular vaccine (DPT booster-1) to toddler at selected Anganwadi of Dadra and Nagar Haveli.

HYPOTHESES:

$H0_1$: There will be no significance difference in level of pain while immunization among toddlers in experimental group and control group.

$H0_2$: There will be no significant association between selected demographical variable and level of pain at 0.05 level of significance.

H_1: There will be significance difference between level of pain while immunization among toddlers in experimental group and control group.

H_2: There will be significant association between selected demographical variable and level of pain at 0.05 level of significance

RESEARCH DESIGN:

Quasi experimental design was adopted for this study.

VARIABLES:

Independent variable: Bubble Popping

Dependent Variable: level of pain

Population:
Toddler (13-24 months) who were came for immunization

Sample Size: 60 samples (30 in experimental group and 30 in control

group)

Sampling Technique: Purposive sampling technique used.

Inclusive Criteria:
- Toddler who received given IM immunization (DPT Booster-1)
- Children's whose age between 13-24 month

Exclusion Criteria:
- Toddler who are diagnosed with any malnutrition problem like SAM and MAM.
- Parents who are not willing to participate.

TOOLS USED FOR DATA COLLECTION

Section I: Demographic variable

It is consist of demographical variable such as Age, Gender, Education of mother, Previous history of hospitalization, Monthly family income, No. of siblings, Type of family, Residence, Previous experience of vaccination, And Caregiver of child during vaccination

Section II: FLACC Behavioural Pain Scale

The Ethical Committee Clearance:

Ethical Committee Clearance Certificate was obtained. Institutional Ethical committee and administration permission was obtained from the Director of DMHS, DNH &DD. The feasibility of conducting the study was ensured.

RESULT:

Section A: - Description of socio demographic variables

The graphical representation of selected demographical variable are as follows:

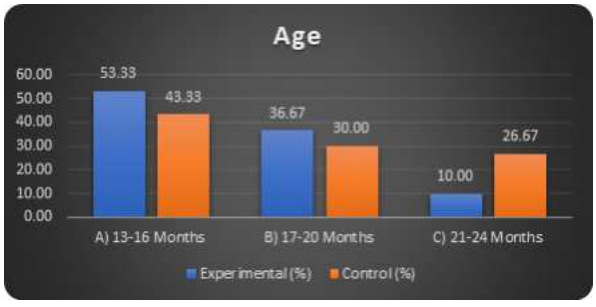

Figure.4.1: Distribution of sample according to age and frequency percentage

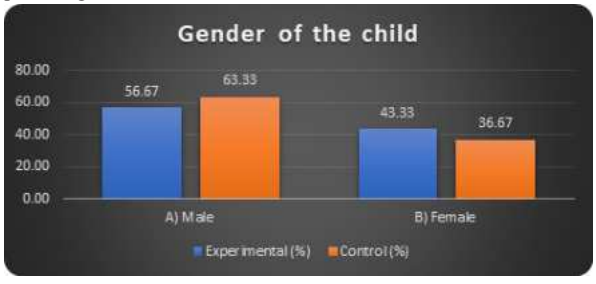

Figure 4.2: Distribution of sample according to gender of child and frequency percentage

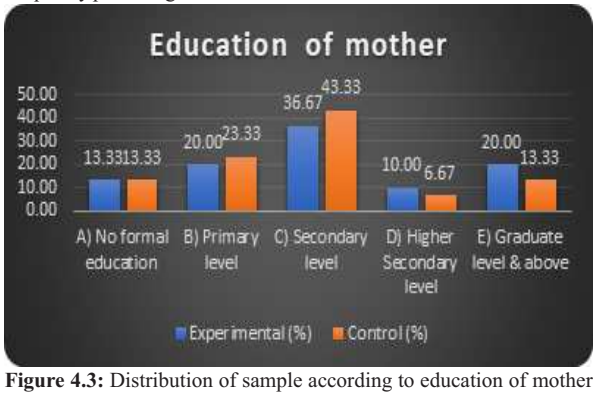

Figure 4.3: Distribution of sample according to education of mother and frequency percentage

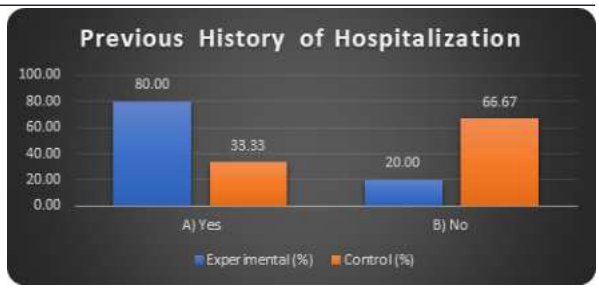

Figure 4.4: Distribution of sample according to previous history of hospitalization and frequency

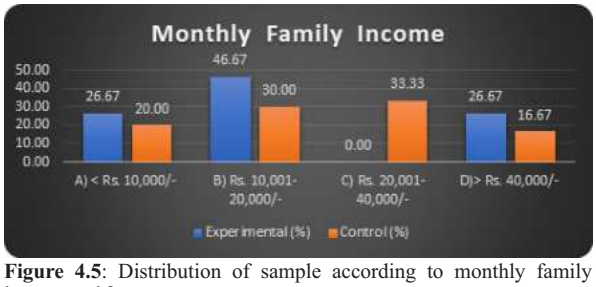

Figure 4.5: Distribution of sample according to monthly family income and frequency percentage

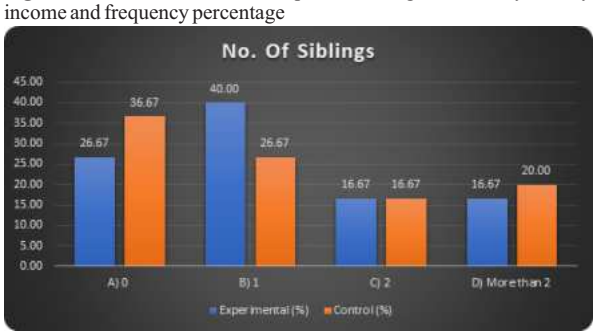

Figure4.6: Distribution of sample according to no. of siblings and frequency percentage

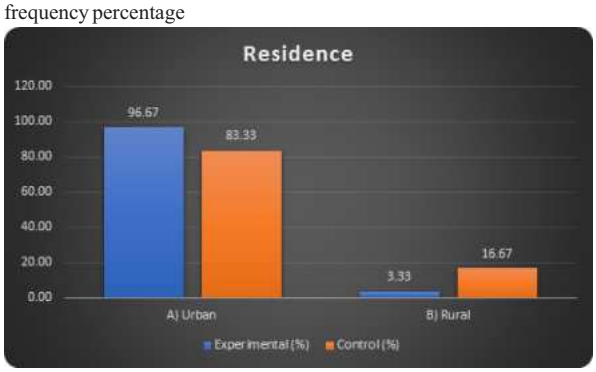

Figure 4.7 : Distribution of sample according to residence and frequency percentage

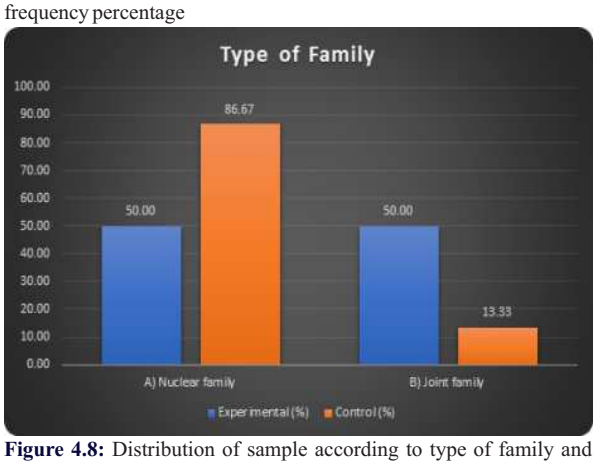

Figure 4.8: Distribution of sample according to type of family and frequency percentage

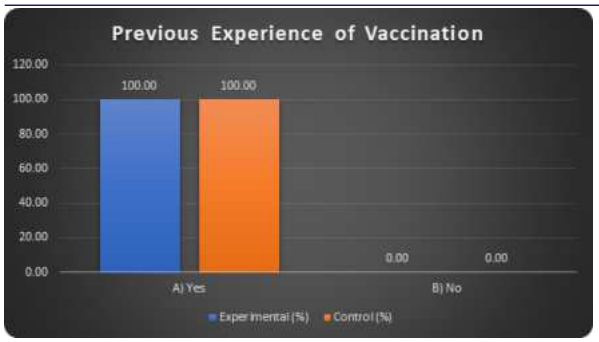

Figure 4.9: Distribution of sample according to Previous Experience of vaccination and frequency percentage

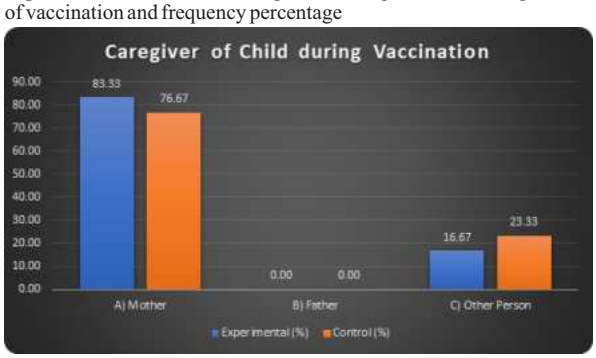

Figure 4.10: Distribution of sample according to caregiver of child during vaccination and frequency percentage

Section B: - Frequency and Percentage Distribution of FLACC Behavioural Pain Scale Score in toddler among Experimental group and Control group

Table 1.1: - Frequency And Percentage Distribution Of FLACC Behavioural Pain Scale Score In Toddler Among Experimental Group And Control Group N=60

Sr No.	Scale	Score	Experimental Group {n=30}		Control Group {n=30}	
			Frequency	Percentage	Frequency	Percentage
1	Relaxed and comfortable	0	2	6.7	0	0
2	Mild discomfort (Pain)	(1-3)	7	23.3	0	0
3	Moderate pain	(4-6)	19	63.3	6	20.0
4	Severe discomfort or pain or both	(7-10)	2	6.7	24	80.0

Section C: - Comparison Of Level Of Pain Score Of Experimental Group And Control Group

Table 1.2: Comparison Of Level Of Pain Score Of Experimental Group And Control Group

Sr No	Group	Sample	Mean	SD	t value	Df	p value
1	Experimental group	n=30	4.00	1.912	8.097	58	0.000004
2	Control group	n=30	7.47	1.358			

-P<0.05, significant and **-P<0.01 &-P<0.001, Highly significant**

The table depicts the level of pain among toddler while immunization among toddler in experimental group and control which was calculated by unpaired t test.

Section D: - Find out the association between selected demographical variable and level of pain among toddler while immunization.

Table 1.3:- Association Between Selected Demographical Variable And Level Of Pain Among Toddler While Immunization Of Experimental Group (n=30)

Demographical variable	Chi square value	Df	p-Value
1.Age	2.404	6	0.879 NS
2.Gender of the child	1.692	3	0.639 NS
3.Education of mother	20.018	12	0.067 NS
4.Previous History of Hospitalization	2.603	3	0.457 NS
5.Monthly Family Income	7.963	6	0.241 NS
6.No. of Siblings	6.491	9	.690 NS
7.Type of Family	1.759	3	.624 NS
8. Residence	.599	3	.897 NS
10.Caregiver of Child during Vaccination	2.039	3	.564 NS

Table.1.4: Association Between Selected Demographical Variable And Level Of Pain Among Toddler While Immunization Of Control Group (n=30)

Demographical variable	Chi square value	df	p-Value
1.Age	0.326	2	.850 NS
2. Gender of the child	0.036	1	.850 NS
3.Education of mother	1.961	4	.743 NS
4.Previous history of hospitalization	.938	1	.333 NS
5.Monthly family income	2.986	3	.394 NS
6.No. of siblings	3.395	3	.335 NS
7.ype of family	.072	1	.788 NS
8. Residence	1.500	1	.221 NS
10.Caregiver of child during vaccination	2.283	1	.131 NS

CONCLUSION:

The present study was conducted to assess the effectiveness of Bubble Popping on level of pain among toddler while immunization at selected Anganwadi of Dadra and Nagar Haveli. During the study, that the 80% of toddler were found have severe discomfort or pain or both in control group and 63.3% of toddler were found have moderate discomfort(pain) in experimental group. This study concluded that the level of pain score is decreased in experimental group than the control group after giving bubble popping while immunization.

REFERENCES:

1. Jimmy Buffett. Therapy is extremely expensive. Popping bubble wrap is radically cheap. [Internet]. Available from: https://quotefancy.com/quote/1112428/Jimmy-Buffett-Therapy-is-extremely-expensive-Popping-bubble-wrap-is-radically-cheap
2. PubMed. Effectiveness of bubble popping as a distraction technique during vaccination for toddlers. [Internet]. Available from: https://pubmed.ncbi.nlm.nih.gov/19781434/
3. PubMed Central. Pain management in children. [Internet]. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC3001531/
4. Stevens BJ, Abbott LK, Yamada J, Harrison D, Stinson J, Taddio A, et al. Epidemiology and management of painful procedures in children in Canadian hospitals. CMAJ. 2011;183(7): E403–E410. doi: 10.1503/cmaj.101341
5. Patra S, Mishra R. Effectiveness of bubble popping as a diversion during vaccination for toddlers in Odisha: A quasi-experimental study. Int J Pediatr Nurs. 2023;9(2):45.
6. Ravi K, et al. Parental anxiety and child pain perception in the pediatric pain management unit. Indian J Pediatr. 2019;86(12):1127–1133.
7. Ministério da Saúde. [Internet]. Available from: 2019
8. Robabi, Askari, & Saeedinegad. [Internet]. Available from: 2016