



A STUDY TO EVALUATE THE EFFECTIVENESS OF SELECTED PLAY ACTIVITIES ON LEVEL OF ANXIETY AMONG HOSPITALIZED PRE-SCHOOL CHILDREN AT SELECTED HOSPITALS BANGALORE.

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ABSTRACT

The study was aimed to evaluate the effectiveness of selected play material on level of anxiety among hospitalized preschool children at selected Hospitals Bangalore. The research design selected for the present study was post-test only design group. It is a Quasi-experimental study. Non probability purposive sampling techniques was adapted for the study. A sample of 60 Preschool children, 3 to 6 years of age group were selected for this study and FLACC behavioural scale was used to assess the level of anxiety .

The results says in the post test experimental group, majority of the subjects 14(46.7) had anxiety score between (1-3) mild anxiety in experimental group and 25 (83.3) had score (7-10) severe anxiety in control group. In comparison of the experimental and control group, the overall mean 2.77 and standard deviation was 2.40 where as in the control group the overall mean 4.97 and standard deviation was 2.14. The student 't' test value at $p < 0.05$ was 3.74. So that null hypothesis (H_0) is rejected and research hypothesis (H_1) is accepted which says that there is a significant difference in mean scores of level of anxiety among pre-school children during hospitalization between two groups.

Keywords: Effectiveness, Selected Play activities, anxiety, Hospitalization.

INTRODUCTION

“Anxiety is a thin stream of fear trickling through the mind, if encouraged, it cuts a channel into which all other thought are drained.”

- Arthur somers roche

The Children are vitals to the nation present and its future. Parents grandparents aunts and uncle are usually committed to providing every advantage possible to the children in their families and to ensure that they are healthy and have opportunities, that they need to full fill their potential.¹ Play is an integral part of the hospitalized child's plan of care. Play offers, the child, an opportunity or creative expression, diversion and effective coping. In the hospitals a supervised play programme provides warm friendly atmosphere that will help the child continue o grow and develop. In the larger hospital a child life specialist may co ordinate the play programme. A place to play, suitable materials and others children to play with are essential because play is a child way of learning toys materials and equipment and learning tools.²

Illness in child cause fear and anxiety in 4 to 6 years old children, According to parents 83% of preschool or kindergarten-aged children suffers from different kind of anxiety symptoms related to hospital fear even after a minor operation in a hospital. Biologically, a child is generally a human between the stages of birth and puberty. The legal definition of child generally refers to a minor, otherwise known as a person younger than the age of majority.³

In hospital setting, children often experience anxiety that can be associated with negative emotional and psychological implications. Anxiety in children with acute and chronic disease is a major public health problem that has been increasing over the last 20 years. Hospitalized children required more recreational play because illness and hospitalization constitute crisis in a child's life and since this situation are fraught with over whelming stress, children's need to play out their fears and anxieties as a means of coping with this stress. Play also help temporarily to divert their mind pain and anxeity.³

According to Whaley and Wong's, school children easily distracted even though they have different temperaments. In order to decrease the anxiety experience during procedures divisional activities in the form of play, game, radio, video- cassette recorder and television can be used. Cartoon movies are successful diversion for a child who is hospitalized.⁴

Play promotes healing and helps the child to cope with stressful experiences. The attitudes and feeling that children reveals in their play are full of meaning. Every opportunity should be afforded the hospitalized child to use play and other expensive activities to lessen stress, thus promoting healthy resolution of the negative aspects of the hospital experiences. The child can find acceptable outlets for hostilities through play activities.⁵

The proper selection of toys can provide constructive, educational stimulating , relaxing, divisional, or therapeutic value. Play is an essential element in the development of healthy individuals; childhood play is an integral part of the development process in young children. Its occurs spontaneously in children and

gives then an important medium for informal learning play is not a purposeless activity serving only to pass the childhood hours, it is a vital factor in intellectual, social, and emotional development of a child⁶.

The way a child naturally express himself/herself is through their play. Often we find that the child who is confronted with a major life adjustment. Play therapy is designed to help children grow up as happy and well adjusted as possible.⁷

Play for most hospitalized children centres around self and stressful situations as perceived by the child and is restricted in terms of what the environment and physical limitations of the child present. One who had an expert knowledge of children and play equipment is useful to plan purposeful play programs or play sessions fir the special needs of hospitalized children. Such collaboration will insure that play will be carried out in a consistent growth-promoting manner. For some children, hospitalization is a challenging experience that promotes a sense of competence. For other children, hospitalization is an experience that results in a negative outcomes. Nurse can use play to provide paediatric patients with emotional and cognitive growth-promoting activities which facilitate a more positive hospital experience and long- term outcome.²²

Several studies have shown that therapeutic play is effective in decreasing anxiety and fears for children from the time of admission to immediately after surgery and to the time of discharge. Accordingly, in studies where children were preferred therapeutic play, they exhibited greater co-operation during stressful procedure and were more willing to return to the hospitals for further treatment.

Hence, the investigator keeping the above view felt that the selected play therapy will help the children to be more comfortable in hospital environment.

MATERIALS AND METHODS

The quantitative research approach was adopted in this study. Non – probability purposive sampling technique was adopted in selecting samples (n=60). The tool used for the study is standard scale,It is organized as Section I- Socio demographic data, Section II- FLACC Scale was used as a tool to assess the level of anxiety among children who are admitted. This tool includes five categories of pain behaviour , including facial expression, leg movement, activity, cry, consolability. Ten experts constituting three psychiatrists, two psychologists and five mental health nursing personnel were validated the Tool.

The Karl Pearson Co-efficient correlation method was used to check Reliability. 10% of the samples obtained subject for reliability co efficient using Split Half method considering the Karl Pearson's co efficient formula. The computed reliability coefficient of the tool found to be 0.9443 which is higher than the standard value of 0.07.Hence the tool considered found to be most reliable and take for conducting the main study.. The data was analyzed by using descriptive and inferential statistics.

RESULTS**SECTION1: : OVER ALL AND ASPECT WISE BEHAVIOURAL ANXEITY LEVEL AMONG EXPERIMENTAL AND CONTROL GROUP OF PRESCHOOL CHILDREN****TABLE-1****Table 1: Experimental group level of anxiety****N=60**

Level of Anxiety	Experiment group	
	No. of children	%
Relaxed and comfortable	8	26.67%
Mild anxiety	12	40.00%
Moderate anxiety	8	26.67%
Severe anxiety	2	6.66%
Total	30	100.00%

The above table, shows in the post test experimental group, majority of the children 26.67% are having Relaxed and comfortable level of score, 40.00% are having mild anxiety level ,26.67% of them are having moderate anxiety level, 6.66% are having severe level of anxiety.

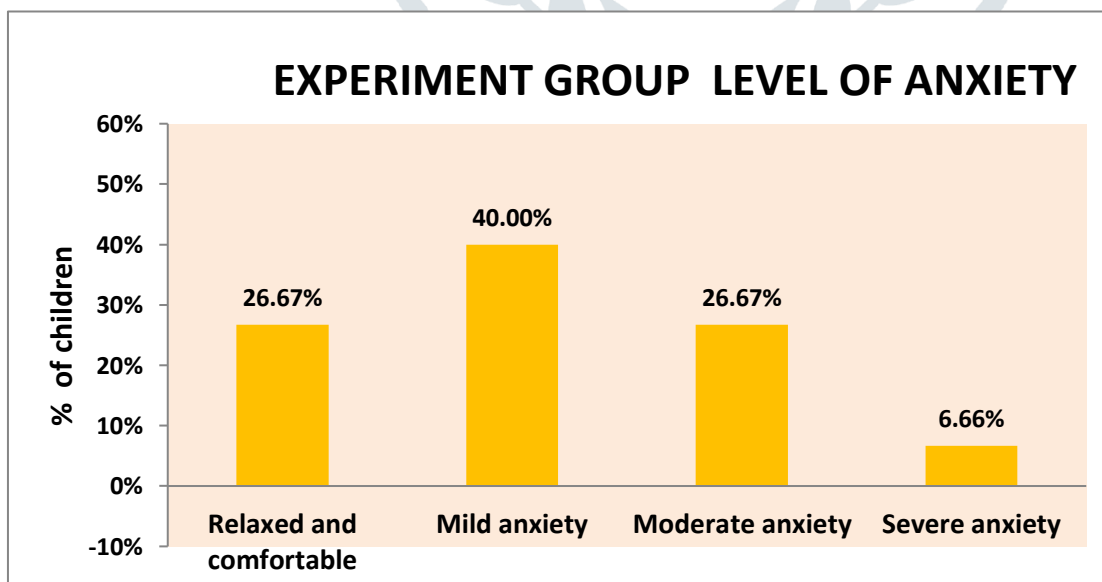
**GRAPH 1: EXPERIMENTAL GROUP LEVEL OF ANXEITY**

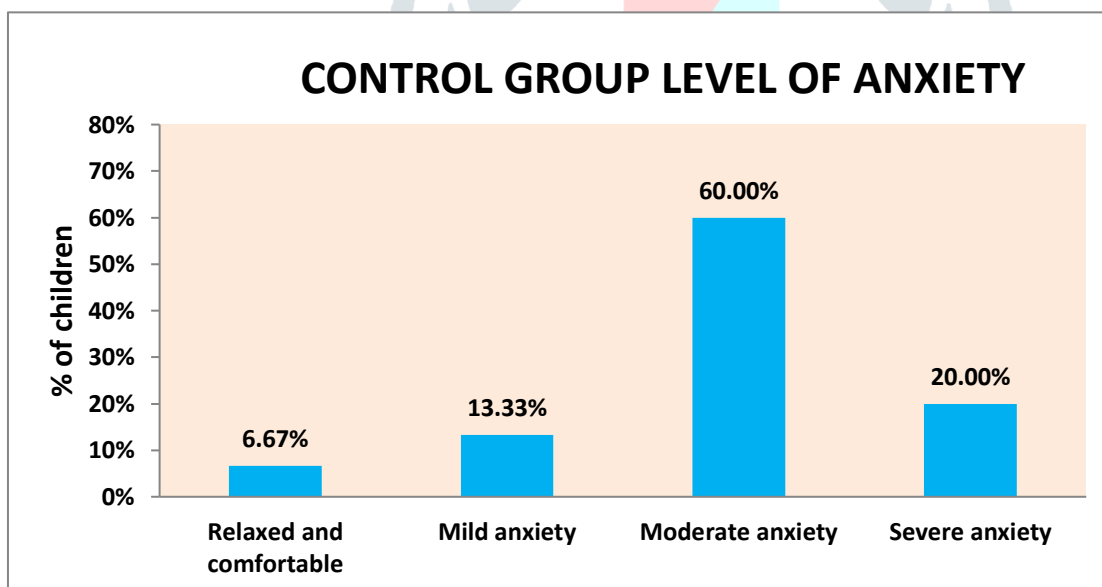
Table- 2

Table -2 Control group level of anxiety

N=60

Level of Anxiety	Control group	
	No. of children	%
Relaxed and comfortable	2	6.67%
Mild anxiety	4	13.33%
Moderate anxiety	18	60.00%
Severe anxiety	6	20.00%
Total	30	100.00%

The above table, shows in the post test control group,6.67% are having Relaxed and comfortable level of score, 13.33% are having mild anxiety level ,60.00% of them are having moderate anxiety level, 20.00% are having severe anxiety level .



GRAPH 2: CONTROL GROUP LEVEL OF ANXEITY

TABLE- 3

Table-3 COMPARISON OF LEVEL OF ANXIETY AMONG PRESCHOOL CHILDREN

N=60

Level of anxiety	Respondents				Chi square test
	Experiment		Control		
	n	%	n	%	
Relaxed and comfortable	8	26.67%	2	6.67%	$\chi^2=12.52$ P=0.01**(S)
Mild anxiety	12	40.00%	4	13.33%	
Moderate anxiety	8	26.67%	18	60.00%	
Severe anxiety	2	6.66%	6	20.00%	
Total	30	100.00%	30	100.00%	

The above table shows the comparison the level of anxiety experienced by pre- school children during hospitalization in experimental and control group by using FLACC behavioural anxiety scale.

In experiment, 26.67% are having Relaxed and comfortable level of score, 40.00% are having mild anxiety level , 26.67% of them are having moderate anxiety level, 6.66% are having severe anxiety level

In control, 6.67% are having Relaxed and comfortable level of score, 13.33% are having mild anxiety level , 60.00% of them are having moderate anxiety level, 20.00% are having severe anxiety level. There is a significant difference between Experiment and Control group. It was assessed by using chi square test.

TABLE- 4

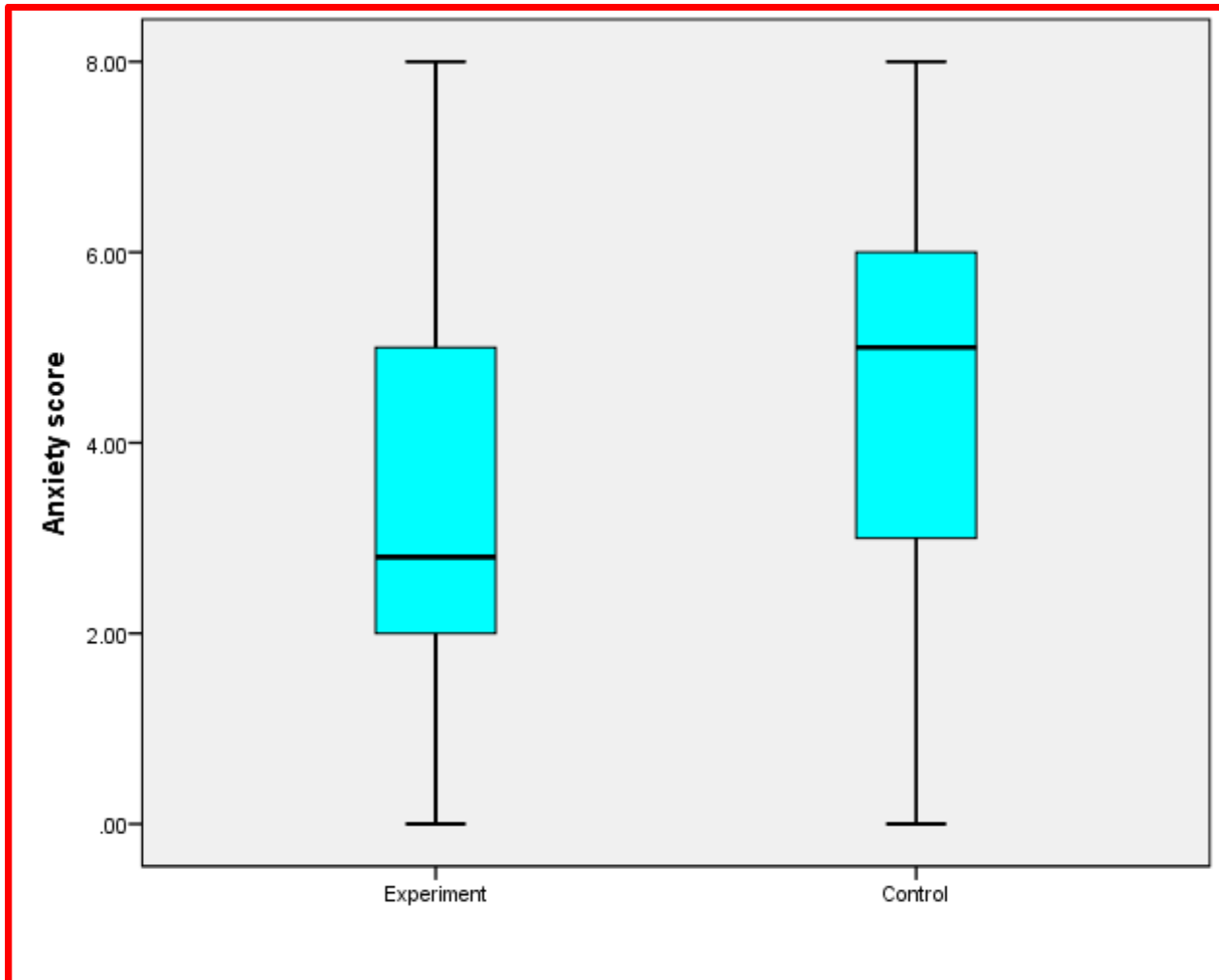
Table-4 COMPARISON OF MEAN ANXIETY SCORE BETWEEN EXPERIMENT AND CONTROL GROUP OF PRESCHOOL CHILDREN N=60

Group	No. of children	Anxiety Mean± SD	Mean difference Mean± SD	Student's independent t-test
Experiment	30	2.77 ± 2.40	2.20	t=3.74 P=0.005*** DF = 59, significant
Control	30	4.97 ± 2.14		

*** very high significant at $P \leq 0.005$

Inference.:

The calculated value of children t-test came out to be 2.77, which was more than the table value at 0.05 levels i.e., 1.96. So that null hypothesis (H_{01}) is rejected and research hypothesis is accepted which says that there was a significant difference between in anxiety level among experimental and control group.



Graph-3: BOX-PLOT compares the anxiety score between experiment and control group of pre-school children.

TABLE- 5

Table-5 EFFECTIVENESS AND GENERALIZATION OF PLAY ACTIVITY

N=60

	Max score	Mean score	% of mean score	Mean Difference of anxiety score with 95% Confidence interval	Percentage Difference of anxiety score with 95% Confidence interval
Experiment	10	2.77	27.7%	2.20(1.02 – 3.37)	22.0%(10.2% –33.7%)
Control	10	4.97	49.7%		

The experiment group children are having 22% less than control group children anxiety score. This difference shows the effectiveness selected play activities on level of anxiety among the hospitalized pre-school children by comparing the experimental and control group.

Differences and generalization of play activity score between experimental and control group score was calculated using and mean difference with 95% CI and proportion with 95% CI. In this study effectiveness of the study is point estimate of 22.00% and interval estimate is 10.2% to 33.7%. It means in this similar setup of the study, whom ever conducted , 95 % we can assure , effectiveness of the study will lies between 10.2% to 33.7% anxiety score reduction.

SECTION-II

Section-II: Association between demographic variables and behavioural anxiety level among experimental and control group of preschool children.

TABLE-6

Table -6 Association between level of anxiety and demographic variables (experiment) group

N=60

Demographic variables		Level of anxiety								Sample (N)	Chi square test
		Relaxed and comfortable		Mild anxiety		Moderate anxiety		Severe anxiety			
		N	%	N	%	N	%	N	%		
Age	3yrs	4	44.4	4	44.4	1	11.2	0	0.0	9	$\chi^2=19.59$ $P=0.05^*(NS)$
	4yrs	4	28.6	5	35.7	5	35.7	0	0.0	14	
	5yrs	0	0.0	2	50.0	2	50.0	0	0.0	4	
	6yrs	0	0.0	1	33.3	0	0.0	2	66.7	3	
Gender	Male	8	72.7	0	0.0	3	27.3	0	0.0	11	$\chi^2=3.42$ $P=0.33 (NS)$
	Female	0	0.0	12	63.2	5	26.3	2	10.5	19	
Education status	Play group	4	57.1%	3	42.9%	0	0.0%	0	0.0%	7	$\chi^2=35.05$ $P=0.05^* (S)$
	Nursery	4	33.3%	6	50.0%	2	16.7%	0	0.0%	12	
	LKG	0	0.0%	3	33.4%	6	66.6%	0	0.0%	9	
	UKG	0	0.0%	0	0.0%	0	0.0%	2	100.0%	2	
Religion	Hindu	4	44.4%	3	33.3%	2	22.3%	1	11.1%	9	$\chi^2=2.39$ $P=0.08 (NS)$
	Muslim	2	20.0%	4	40.0%	3	30.0%	1	10.0%	10	

	Christian	2	18.3%	4	36.4%	3	27.3%	0	0.0%	11	
Type of family	Nuclear	4	33.3%	5	41.7%	3	25.0%	0	0.0%	12	$\chi^2=1.03$ P=0.79 (NS)
	Joint	0	0.0%	7	50.0%	5	35.7%	2	14.3%	14	
	Others	4	100.0%	0	0.0%	0	0.0%	0	0.0%	4	
No.of siblings	None	3	33.3%	4	44.5%	1	11.1%	1	11.1%	9	$\chi^2=10.45$ P=0.32(NS)
	One	2	18.2%	7	63.6%	2	18.2%	0	0.0%	11	
	Two	2	22.2%	1	11.1%	5	55.6%	1	11.1%	9	
	three or more	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	
care giver of child	Mother	8	72.7%	0	0.0%	3	27.3%	0	0.0%	11	$\chi^2=13.31$ P=0.05* (S)
	Father	0	0.0%	7	58.3%	3	25.0%	2	0.0%	12	
	Grandparents	0	0.0%	5	71.4%	2	28.6%	0	0.0%	7	
child admission status	Stable	8	57.1%	3	21.4%	3	21.4%	0	0.0%	14	$\chi^2=13.42$ P=0.01** (S)
	Sick	0	0.0%	9	56.3%	5	31.3%	2	12.5%	16	
previous history of hospitalisation	Yes	4	28.5%	7	50.0%	3	21.5%	0	0.0%	14	$\chi^2=1.77$ P=0.62 (NS)
	No	4	25.0%	5	31.3%	5	31.3%	2	12.5%	16	
immunisation status	Complete	5	29.4%	8	47.1%	4	23.5%	0	0.0%	17	$\chi^2=2.22$ P=0.53 (NS)
	Incomplete	3	17.9%	4	30.8%	4	30.8%	2	15.4%	13	

*Significant at 5% level,

NS:Non- Significant

To determine the association between demographic variables and behavioural anxiety level of experiment group among pre school children with their selected socio-demographic variables **null hypothesis (H₀₂)**was developed i.e., **there is no significant association on level of anxiety among pre**

school children during hospitalization with selected socio demographic variables of experimental group.

The level of significance was set at 0.05 levels. In order to determine association between demographic variables and behavioural anxiety level with their selected demographic variables the chi-square test (χ^2) was computed.

TABLE- 7

Table -7 Association between level of anxiety and demographic variables (control) group

N=60

Demographic variables		Level of anxiety								Sample (N)	chi square test	
		Relaxed and comfortable		Mild anxiety		Moderate anxiety		Severe anxiety				
		N	%	N	%	N	%	N	%			
Age	3yrs	1	8.3	2	16.7	8	66.7	1	8.3	12	$\chi^2=9.41$ $P=0.40$ (NS)	
	4yrs	0	0.0	0	0.0	9	81.8	2	18.2			11
	5yrs	1	25.0	1	25.0	1	25.0	1	25.0			4
	6 yrs	0	0.0	1	33.3	0	0.0	2	66.7			3
Gender	Male	1	7.7	1	7.7	5	38.5	6	46.2	13	$\chi^2=6.80$ $P=0.08$ (NS)	
	Female	1	5.9	3	17.6	13	76.5	0	0.0			17
Education status	Play group	1	16.7	2	33.3	3	50.0	0	0.0	6	$\chi^2=11.20$ $P=0.26$ (NS)	
	Nursery	0	0.0	1	7.7	10	76.9	2	15.3	13		
	LKG	1	14.3	0	0.0	5	71.4	1	14.3	7		
	UKG	0	0.0	1	25.0	0	0.0	3	75.0	4		
Religion	Hindu	1	9.1	3	27.3	7	63.6	0	0.0	11	$\chi^2=9.10$	

	Muslim	0	0.0	0	0.0	6	100.0	0	0.0	6	P=0.09 (NS)
	Christian	1	7.7	1	7.7	5	38.5	6	46.2	13	
Type of family	Nuclear	0	0.0	0	0.0	13	81.3	3	18.7	16	$\chi^2=11.78$ P=0.07 (NS)
	Joint	1	9.1	2	18.	5	45.	3	27.2	11	
	Others	1	33.3	2	66.7	0	0.0	0	0.0	3	
No.of siblings	None	2	33.3	2	33.3	2	33.4	0	0.0	6	$\chi^2=12.98$ P=0.16(NS)
	One	0	0.0	0	0.0	11	78.6	3	21.4	14	
	Two	0	0.0	2	25.0	3	37.5	3	37.5	8	
	three or more	0	0.0	0	0.0	2	100.0	0	0.0	2	
care giver of child	Mother	0	0.0	4	36.4	7	63.	0	0.0	14	$\chi^2=10.15$ P=0.10 (NS)
	Father	2	16.7	0	0.0	8	66.7	2	16.7	10	
	Grandparents	0	0.0	0	0.0	3	42.9	4	57.1	6	
child admission status	Stable	1	6.3	3	18.7	12	75.0	0	0.0	16	$\chi^2=5.70$ P=0.12 (NS)
	Sick	1	7.1	1	7.1	6	42.9	6	42.9	14	
previous history of hospitalisation	Yes	1	9.1	3	27.3	7	63.6	0	0.0	11	$\chi^2=3.99$ P=0.26 (NS)
	No	1	5.3	1	5.3	11	57.9	6	31.7	19	
immunisation status	Complete	0	0.0	4	26.7	10	66.7	1	6.6	15	$\chi^2=5.88$ P=0.12 (NS)
	Incomplete	2	13.3	0	0.0	8	53.3	5	33.3	15	

*Significant at 5% level

NS: Non-Significant

To determine the association between demographic variables and behavioural anxiety level of experiment group among pre- school children with their selected socio-demographic variables **null hypothesis (H_{02}) was developed i.e., there is no significant association on level of anxiety among pre - school children during hospitalization with selected socio demographic variables of experimental group.**

The level of significance was set at 0.05 levels. In order to determine association between demographic variables and behavioural anxiety level with their selected demographic variables the chi-square test (χ^2) was computed.

DISCUSSION:

In the post test experimental group, majority of the subjects 14(46.7) had anxiety score between (1-3) mild anxiety in experimental group and 25 (83.3) had score (7-10) severe anxiety in control group.

In comparison of the experimental and control group, the overall mean 2.77 and standard deviation was 2.40 where as in the control group the overall mean 4.97 and standard deviation was 2.14. The student 't' test value at $p < 0.05$ was 3.74. So that null hypothesis (H_{01}) is rejected and research hypothesis (H_1) is accepted which says that there is a significant difference in mean scores of level of anxiety among pre-school children during hospitalization between two groups.

When an association between demographic variables and behavioural anxiety level among experimental and control group is considered, there was statistically significant association found with socio demographic variables age ($\chi^2 = 14.81^*$, $d f = 2$) gender ($\chi^2 = 7.55^*$, $d f = 2$), history of previous hospitalization ($\chi^2 = 9.11^*$, $d f = 2$) in experimental group; gender ($\chi^2 = 6.86^*$, $d f = 2$), type of family ($\chi^2 = 7.85^*$, $d f = 2$) in control group. Hence, null hypothesis no association between demographic variables and behavioural anxiety level among experimental and control group is rejected. The research hypothesis **H_2 , "There was a significant association on behavioural anxiety level among pre-school children during hospitalization with selected socio-demographic variable of experimental and control group."** is accepted.

CONCLUSION

The present study was conducted to evaluate the effectiveness of selected play activities on level of anxiety among preschool children at selected hospital in Bangalore. The sample were allotted to two groups-experimental and control with 30 sample each. The sample in the experimental group received the intervention of selected play activities and sample in control group received no intervention.

- The findings of the study in post test showed that, the majority of the subject, 25 (83.3%) had score (7-10) severe discomfort in control group and 14(46.7%) in the experimental group had anxiety score (1-3) mild discomfort.
- When the comparison of behavioural pain among experimental and control group, the calculated value of student t-test came out to be 2.79, which was more than the table value at 0.05 levels i.e.,

.Hence, **null hypothesis (H_{01}) is rejected and research hypothesis (H_1) is accepted which says that there was a significant difference in mean score of behavioural anxiety level among pre-school children during hospitalization between experimental and control group.**

- When an association between demographic variables and behavioural anxiety level among experimental and control group is considered, there was statistically significant association found with socio demographic variables age($x=14.81^*$, $d f=2$) gender ($x=7.55^*$, $d f=2$), history of previous hospitalization ($x= 9.11^*$, $d f=2$) in experimental group; gender ($x=6.86^*$, $d f=2$),type of family ($x= 7.85^*$, $d f=2$)in control group. Hence, null hypothesis no association between demographic variables and behavioural anxiety level among experimental and control group is rejected. The research hypothesis **H_2 ,"There was a significant association on behavioural anxiety level among pre-school children during hospitalization with selected socio-demographic variable of experimental and control group."** is accepted.

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