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A Study to Assess the Effectiveness of Craft Therapy on Anxiety of Hospitalized Children in A Selected Hospital Indore

Mahimai Jacquline Josephine C[1], Jyoti Jose[2]

[1,2]Nursing, St. Francis college of nursing/ MPMSU, India

Abstract:
Over the past two decades, the pediatric population in hospitals has undergone significant change. Children are afraid of doctors, nurses, hospital routines and other health care workers. In other words, they have a phobia of white uniforms.

1. To compare the anxiety among hospitalized children between experimental and control group.
2. To determine the association of anxiety among hospitalized children in experimental and control group with selected baseline variables.

The study had a pre-test, post-test control group and employed a quantitative research design. The Paediatric Department performed the procedure. 40 children from the age group of 6 and 12 were selected using purposive sampling technique. To prevent contamination, data from the control group was first acquired. Over the course of two days, the study group participated in three craft therapy sessions. Every child had a 30 minute session. The kids discovered how to use colored paper to create bright toys like frogs, boats, fish, and butterflies. Etc. After two days, the anxiety levels of both the group were measured using the anxiety assessment checklist.
The findings indicated that the that the pretest mean score of the study group was (9.57) and that of the group under control was (9.07), while the posttest mean score of the study group was (3.4) and that belonging to the control group was (5.57). Prior to therapy, the study group exhibited noticeably greater levels of hospitalized anxiety in contrast to the group under control ($p<0.001$).
The present research demonstrates that providing Craft therapy to hospitalized children reduces anxiety.

Keywords: Effectiveness, Anxiety, Craft, Hospitalization, Children.

1. Introduction

Hospitalization is the planning process wherein the child must remain in the hospital to receive medication and treatment. However, children who are admitted to hospitals experience anxiety and terror, are forced to leave behind familiar surroundings and loved ones, and are unable to carry out regular play and daily activities. When they anticipate and interact with medical professionals in healthcare settings, children frequently report feeling scared or nervous. What's most worrisome is that 20% of people say they experience "white coat syndrome" a social anxiety disorder brought on by this shift in environment when they interact with medical professionals. Playing is an essential task for a child. Play helps children heal and learn how to handle stressful situations. Likewise, notable philosophers such as "Aristotle and Plato" have contemplated the essential role that plays in a child's development. Craft therapy is one type of play therapy. Children don't have to struggle to do it therefore it offers a child a forum to communicate their emotions and unwanted thoughts, develop their cognitive abilities, and acclimate to a new setting all of which contribute to a quicker recovery and cooperation with hospital protocols. Nurses may employ craft as a therapeutic approach for children in hospitals.

2. Literature Review

In 2016, a quantitative investigation was carried out in one of the Vadodara hospitals to evaluate the effectiveness of play therapy on anxiety among hospitalized children with the sample size of 30 in experimental, 30 in control group. The study's sample was chosen using a convenient sampling technique. Utilizing a structured anxiety rating scale, data was gathered. In experimental Post-test mean score, 37.87 and SD was 14.708 respectively. The obtained “t” value 14.015 statistically was significant at 0.000 level. In Comparison of mean score of experimental post – test and control post – test that the obtained “t” value is 8.165 statistically value was .000 so it is significant (< 0.05). Thus the study concluded that the degree of anxiety was reduced in experimental group after the introduction of play therapy.

3. Research Methodology

Materials and Methods

3.1 Research Approach: Quantitative Research Approach Research
3.2 Design: Quasi Experimental (pre test post test control group) design
3.3 Sampling technique: Purposive sampling technique
3.4 Sample size: 40 (20 in each group)
3.5 Setting of study: Pediatric Medicine department
3.6 Tools: As follows
Section A: Demographic data: It consists of 7 items related to the demographic information of participants.
Section B: Children anxiety assessment check list: The scale comprises of 3 categories with 20 items. 1) Child’s reaction during hospitalization with 6 items 2) Reaction during procedures with 10 items 3) Reaction related to bodily injury and pain with 4 items.

3.7 Data collection method

From the relevant authority, formal administrative permission was acquired. For parents and kids who are older than seven, respectively, written consent and assent were obtained. To obtain the baseline variables, a schedule of interviews was used first, information was obtained from the control group to avoid contamination. For two days, the experimental group's children participated in two craft therapy sessions. Every kid received 30 minutes of instruction during each session. Making bright toys, animals, boats, fish, butterflies, fortune tellers, and frogs was among the arts and crafts the kids learned. The anxiety assessment checklist was employed to gauge the degree of anxiety in the control and experimental groups after two days.

3.8 Data analysis as follows

- Descriptive analysis was calculated by frequencies, percentage, mean, and mean%&SD
- Continuous variables were compared between the groups by Independent‘t’test.
- The anxiety in both groups was correlated with a subset of baseline variables using the Chi Square

test for categorical variables.

4. Results and Discussion

4.1. Description of baseline variables of hospitalized children in both the groups.

Forty kids, ages six to twelve, participated in the current study of whom 20 in experimental 2o in control group. Out of these children, the majority of them were between the ages of nine and twelve, (60%) in control group (56%) in experimental group.

These results shared similarities with the study conducted in Wardha in 2017 in which Most of the kids were between the ages of nine and twelve yrs 16(53%).

Regarding the gender the research indicates that most of the kids (50%) in experimental group, and (60%) in control group were male.

Another study done in Haryana where 50% of of the kids were boys 17(56%) were male kids in a study done in Maharashtra. Considering the birth order out of 50 children, (80%) in the control group,(65%) in the experimental group belong to the first birth order. Similar study which is consistent with the current study's outcomes where majority of the children 15 (50%) from first birth order.

Current research indicates that the highest (50%) of the children had previous hospitalization in experimental and control groups. Another study done in Karnataka where 28(93.3%) children had previous hospitalization.

With respect to the care takers, current research demonstrates (75%) of the care takers of children were mothers. Also 54(52.4%) of caretakers were mothers, which is shown in a study done in China in 2005. In relation to the diagnosis of the children greatest numbers (75%) of children were diagnosed with fever.

4.2 Comparison of anxiety among hospitalized children between experimental and control group.

In the current investigation, the experimental and control groups differ significantly from one another ($p = 0.025$) regarding anxiety after the intervention, in this regard, the anxiety of the children is reduced following the implementation of craft therapy.

These results were in line with the study done in Chennai reveals that the Experimental group pretest mean was 33.2, while control group pretest mean was 31.75. The control group's post-test mean was 30.9 and the experimental group's was 28.9. The statistical significance of the difference was observed at($p<0.05$).Hence the research hypothesis H2 is accepted, so that it may be stated that craft therapy is an effective method in reducing anxiety among hospitalized children.

4.3 Association of anxiety among hospitalized children in both the groups with selected baseline variables

The influence of baseline variables on children's anxiety reveals new information. The results of this study depicted that in experimental and control group there was There is no statistically significant correlation between the anxiety score and the chosen baseline variables age, gender, type of family, previous hospitalization, caretakers during hospitalization, and diagnosis.

Present study reveals that the average anxiety score in both the group is less in the category of age (9-12yrs) which says that the children of 9-12 years are able to cope with hospitalization.

These findings were similar to research carried out in Chennai to determine the relationship between age, sex, birth order, type of family, previous hospitalization, care taker during hospitalization, diagnosis of anxiety which turned out to be statistically insignificant at ($p<0.05$) level of significance.

The mean anxiety score in (Ex 5.14, Cont7.91) is less in female of both the groups respectively but Independent sample t test showed nothing appreciably different exists in the average anxiety scores

between male and female for both groups since p(>0.05)
Present study shows that Using chi square, It's evident that there are no appreciable differences in the average anxiety scores between categories of birth order since (p > 0.05) for both experimental and control groups.
Although the average level of anxiety does not significantly differ, the study finds scores between types of family (p > 0.05) in both the groups both groups have lower anxiety scores which shows that children belong to the joint family have comparatively less stress while in the hospital.
With regards to previous hospitalization current study depicts that the mean anxiety score is less in experimental (5.90) & control (7.00) group where the children had previous hospitalization, hence had less stress. No discernible change has occurred in the average anxiety scores between categories of caretaker since the p value for Chi square is > 0.05 in both experimental and control groups.

5. Figures and Tables

Section I: Distribution of baseline variables of both experimental and control groups.

Table 1: Frequency, percentage, Chi-Square, a p-value of baseline variables in of both the groups according to Age, Gender, Birth order, Type of the family, Previous hospitalization, Caretaker during hospitalization, Diagnosis

Sl. No	**Experimental Group (n=20)**				**Control Group (n=20)**		
	Variables	**F**	**%**	**F**	**%**	**Chi Square**	**P value**
1.	**Age in Years**						
	6-9	11	44.0	10	40	0.082	0.774 (NS)
	9-12	14	56.0	15	60		
2.	**Gender**						
	Male	18	72.0	14	56.0	1.38	0.239 (NS)
	Female	7	28.0	11	44.0		
3	**Birth Order**						
	First	15	60.0	17	68.0	0.50	0.837 (NS)
	Second	7	28.0	6	24.0		
	Third	3	12.0	2	8.0		
4.	**Type of the Family**						
	Joint	16	64.0	8	32.0	5.12	0.024 (S)
	Nuclear	9	36.0	17	68.0		
5.	**Previous hospitalization**						
	Yes	20	80.0	20	80.0	.00	1.00 (NS)
	No	5	20.0	5	20.0		
6.	**Caretaker during hospitalization**						
	Father	3	12.0	6	24.0	1.43	0.725 (NS)
	Mother	21	84.0	18	72.0		
	Others	1	4.0	1	4.0		
7.	**Diagnosis**						
	Fever	4	16.0	3	12.0		
	Neurological	1	4.0	1	4.0		

	Respiratory	2	8.0	4	16.0	4.09	0.730 (NS)
	Urinary	9	36.0	11	44.0		
	Hemato Onco	4	16.0	4	16.0		
	GI	2	8.0	2	8.0		
	Musculoskeletal	3	12.0	0	0		

Table 1a indicates that sixty percent (15) of the children in the control group (56.0%) and experimental group (14.0%) are in the 9–12 age range. In the experimental group, 72.0% (18) of the children were male, whereas within the group under control, were 56.0% (14). The majority of the children in both the experimental group (60.0%; 15) and the control group (68.0%; 17) were of the first birth order. Children in the study group make up 64.0% (16) of the joint family, children within the control group make up 68% (17) of the nuclear family. In both groups, 50 children, or 80% (20) of the total, had been hospitalized before. The majority of caregivers in the study group (84.0%) consisted of mothers (21) during hospitalization (72.9%; 18). A urinary system disorder was identified in 44% (11) among the kids in the study group (36.0%) and the control group (n = 9). Consequently, it is possible to say that there isn't a noticeable difference in the baseline variables between the experimental and control groups. With the exception of family type, the groups are therefore comparable.

Section II: Comparison of anxiety among hospitalized children between experimental and control group.

Table2: Mean, Mean%, Mean diff, SD, t value, Independent't' test to compare the anxiety between Experimental and Control group.

Group	Pre-test Mean/ SD	Post-test Mean/SD	't' value	Table value
Experimental Group	9.57 3.52	3.4/ 1.42	6.61	2.02
Control Group	9.07/ 3.45	5.57/ 3.28		

The post-test mean of experimental group was 3.4, while the control group's was 5.57. Post - test score comparison was done to determine the decrease in hospitalized anxiety. Because the computed "t" value (6.61) was greater than the table value (2.02), df = 38, at $p<0.05$, the difference was statistically significant. This demonstrates that the experimental group's anxiety was noticeably lower than that of the control group after receiving craft therapy. Thus the study hypothesis is accepted.

Section III: Relationship between anxiety of hospitalized children in Experimental and Control group with a chosen set of baseline variables.

Table 3: F, Mean, SD, Test of significance, a p-value with chosen demographic variables such as Age, Gender, Birth Order, Type of the Family, Previous Hospitalization, Caretaker during Hospitalization, and Diagnosis in the experimental and control group.

	Experimental Group (n=25)						Control Group (n=25)				
Sl. No	Variables	F	Mean	SD	Test of Sig	'P' Value	F	Mean	SD	Test of Sig	'P' Value
1.	**Age in Years**										

	6-9	11	7.18	2.67	2.00	0.05	10	7.90	1.52	0.501#	0.621
	9-12	14	5.29	2.05			15	8.27	1.94		(NS)
2.	**Gender**										
	Male	18	6.50	2.59	1.23	0.22	14	8.29	2.05	-0.522#	0.60
	Female	7	5.14	2.03			11	7.91	1.37		(NS)
3.	**Birth Order**										
	First	15	6.60	2.50	0.73	0.49	17	7.76	1.52	1.71$	0.20
	Second	7	5.57	2.69			6	8.50	1.97		
	Third	3	5.00	2.00			2	10.0	2.82		(NS)
4.	**Type of the Family**										
	Joint	16	5.44	2.47	-1.92	0.06	8	7.50	1.30	-1.21#	0.23
	Nuclear	9	0.33	2.12			17	8.41	1.90		(NS)
5.	**Previous hospitalization**										
	Yes	20	5.90	2.33	-.88	0.38	20	7.90	1.77	-1.26#	0.21
	No	5	7.00	3.16			5	9.00	1.58		(NS)
6.	**Caretaker during hospitalization**										
	Father	3	4.67	3.51	0.56	0.57	6	8.50	2.16	0.33$	0.72
	Mother	21	6.33	2.41			18	8.06	1.69		(NS)
	Others	1	6.00				1	7.00			
7.	**Diagnosis**										
	Fever	4	8.00	0.81			3	8.00	1.73		
	Neurological	1	9.00	2.82			1	8.00	2.16		
	Respiratory	2	6.00	3.37			4	9.00	1.80		
	Urinary	9	5.89	1.70	0.83	0.55	11	7.45	1.73	0.75$	0.59
	Hemat Onco	4	5.25	1.41			4	8.50	0.70		(NS)
	GI	2	6.00	1.52							
	Musculo skeletal	3	4.67				2	9.50			

NS:Non-significant

Table 6 shows that anxiety and the following baseline variables do not significantly correlate: previous hospitalization, caregiver during hospitalization, diagnosis, age, gender, birth order, and family type. This correlation is observed at the
0.05 level of significance for both the experimental and control groups of hospitalized children.

6. Conclusion

The study's findings led to the conclusion that giving a child a craft therapy platform to express their emotions, lowers anxiety, eliminates unwanted thoughts, boosts cognitive abilities, and helps the child adjust to a new environment will all contribute to a quicker recovery and cooperation with hospital procedures. Play therapy is one method that nurses may use with hospitalized children.

Nursing practice

The research findings will help

- To enlighten the knowledge of nurses on different indoor play activities and diversional therapies.
- Implementing Craft (making toys and animals out of color paper) as a routine play therapy in pediatric ward.
- To facilitate cooperation and communication between staff and children for procedure and moreover it will help them to get adapted to the hospital environment.

Nursing administration

The study's results will

- Facilitate implementation of play activities as a routine in pediatrics wards
- Help in providing necessary facilities in pediatrics wards for diversional therapies.
- Help in integrating diversional therapy and its importance as a topic in continuing nursing education.

Nursing research

The results of the study will

- Serve as a database for further research
- Enable in integrating evidence-based practice in nursing care

Nursing education

Study findings will

- Emphasize the importance of educating students on diversional therapy and its use among pediatric age group.
- Help in motivating the students to use different kinds of diversional therapy during their pediatric clinical posting.

Recommendations

- A qualitative study can be conducted to capture more in-depth data on the stress and anxiety.
- A comparative study with diversional therapy can be done between different age groups.
- A Study can be undertaken to compare two different diversional therapies.

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