



# Assess the Effectiveness of Play Interventions on Anxiety among Hospitalized Children in Selected Hospital of Yamuna Nagar, Haryana: An Experimental Study

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## ABSTRACT

**Background:** Hospitalization can be a threatening and stressful experience for children. Because of unfamiliar with the environment and medical procedures and unaware of the reasons for hospitalization, it can result in children's anger, uncertainty, anxiety, and feelings of helplessness.

**Aim:** The objectives of the study were to assess and compare the level of anxiety before and after the administration of play interventions among hospitalized children in experimental and comparison group and to determine the association of anxiety among hospitalized children with selected variables.

**Method:** A Non-equivalent control group pretest-posttest design was used. Sixty participants were selected using purposive sampling (30 in experimental and 30 in the comparison group). The data was collected by "Structured Anxiety Rating Scale" with structured interview technique from participants.

**Result:** The Findings of this study revealed that in comparison of posttest mean score of anxiety in experimental and comparison group, the obtained 't' value and 'p' value were 12.23 and 0.001 respectively, hence found to be significant ( $p < 0.05$ ) at 0.05 level.

Therefore the study concluded that play interventions are effective in reducing anxiety among Hospitalized Children.

A significant association was found between Anxiety score and selected variables i.e. education of father (0.01), education of mother (0.01), occupation of father (0.03), family monthly income (0.04), place of residence (0.01) and type of family (0.01) and any medical personnel in family (0.04) in comparison group.

**Keywords: Effectiveness, Play Interventions, Anxiety, Hospitalized Children.**

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## **1. INTRODUCTION**

Health is the precious possession of all the human beings as it is an asset for an individual and community as well<sup>1</sup>. World Health Organization (WHO) defines Health, a state of complete physical, mental and social well-being and not merely the absence of diseases or infirmity. Healthy children are the wealth of nation. The National Policy for children says that “A nation’s children are its asset; their nature and solicitude are our responsibility”.

An important index used to estimate the Nation’s health is the health status of children in the country.<sup>3</sup> Unfortunately, even the healthiest baby can get sick. Surgery can be a threatening experience for everyone, especially for children. Hospitalized children may experience high level of anxiety due to many different factors both physical and psychological factors.<sup>4</sup>

In India, approximately 3 million of children undergo surgery, among them boys are more than girls and the ratio is 7:4.<sup>5</sup> Up to 25% of children have been noted to require physical restraint. Loss of freedom can produce stress and anxiety in children.<sup>6</sup>

Hospitalization can be a threatening and stressful experience for children. Because of unfamiliar with the environment and medical procedures and unaware of the reasons for hospitalization, it can result in children’s anger, uncertainty, anxiety, and feelings of helplessness.<sup>7, 8</sup>

Annually, millions of children further encounter ancillary medical caregivers, including medical assistants, nursing staff, laboratory and radiology technologists, occupational, speech, and physical and mental health therapists. These children can also be passive participants in sometimes stressful conversations with administrative professionals regarding finances and insurance coverage. Most concerning, up to 20% of the population reports feeling “white coat syndrome” when coming into contact with medical doctors.<sup>9</sup> Children commonly report feeling afraid or anxious as they anticipate and engage in healthcare settings with medical professionals.<sup>10</sup>

The 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 hospital, a supervised play program provides warm, friendly atmosphere that will help the child continue to grow and develop. In larger hospitals, a child life specialist may coordinate the play program. A place to play, suitable materials and other children to play with are essential. Because play is a child’s way of learning; toys, materials, and equipment are learning tools.<sup>11</sup>

Toys are the “tools” of play and provide a more “natural” environment for a child. The proper selection and use of toys can reduce the traumatic effects of a hospitalization experiences and aid in the recovery phase of illness.<sup>12</sup>

## **2. METHODOLOGY**

The study was conducted on August 2015-July 2017. A sample of 60 children participated in this study with the prior permission from Medical Officer, Aashirwad Hospital, Yamuna Nagar, and Haryana. The ethical clearance was obtained from university research ethics committee of Maharishi Markandeshwar University Mullana, Ambala (MMU/IEC/785) in accordance with the guidelines of ICMR 2006. The written consents from the children’s parents/legal guardians were collected prior to the study. Quantitative research approach and Non Equivalent control group pretest posttest design were used in this study. Hospitalized children aged 6-12 years admitted in the pediatric general medical unit of Aashirwad Hospital who was alert, oriented, comprehend and able to speak and understand Hindi language and anxious due to hospitalization, willing to participate included in the study. Sixty hospitalized children were selected with purposive sampling. Data were collected using Structured Anxiety Rating Scale.

Ethical Consideration: The ethical clearance was obtained from university research ethics committee of Maharishi Markandeshwar University Mullana, Ambala (MMU/IEC/785) in accordance with the guidelines of ICMR 2006. Ethical approval was taken from the University Ethical Committee for conducting the study. The permission was taken from Medical Officer, Aashirwad Hospital, Yamuna Nagar, and Haryana to conduct the study. The consent was taken from Parents before conducting the study.

### 3. PROCEDURE

**On the first day**, Self-introduction and the introduction of the study was given to the patient and patient's attendants about the confidentiality of their responses. The setting was selected by randomization (by lottery method) first selected two rooms from General Pediatric Wards were coded as E<sub>1</sub> (Experimental 1) and E<sub>2</sub> (Experimental 2) whereas next two were coded as C<sub>1</sub> (Comparison 1) and C<sub>2</sub> (Comparison 2). From the selected settings subjects were selected who met the eligibility criteria. Assessment of anxiety (Pre-test) of all the children admitted to Aashirwad Hospital was done in experimental group and Comparison group. In Experimental group after taking pretest play interventions were introduced to the children and instructions regarding the way to play with all the interventions were provided to the children. Though all the children were free to choose the play yet the younger children were given simple and easy play interventions such as drawing, coloring etc. to obtain more sensory experience whereas the older children were offered play interventions such as puzzle, building blocks, ludo etc. with high cognitive demand. The play interventions were administered for 1 hour per day whereas in Comparison group all the subjects were given usual general nursing and medical care. No intervention was administered to the comparison group.

**On day second to the fourth day**, Play interventions were administered for 1 hour per day daily in the experimental group. Whereas in Comparison Group only usual general nursing and medical care were administered.

**On day fifth**, in experimental group after the administration of play intervention for 1 hour, Posttest assessment of anxiety level was done by using structured anxiety rating scale whereas in comparison group posttest assessment of anxiety was done. The procedure of data collection is illustrated in fig. no. 1.

#### Figure Legends

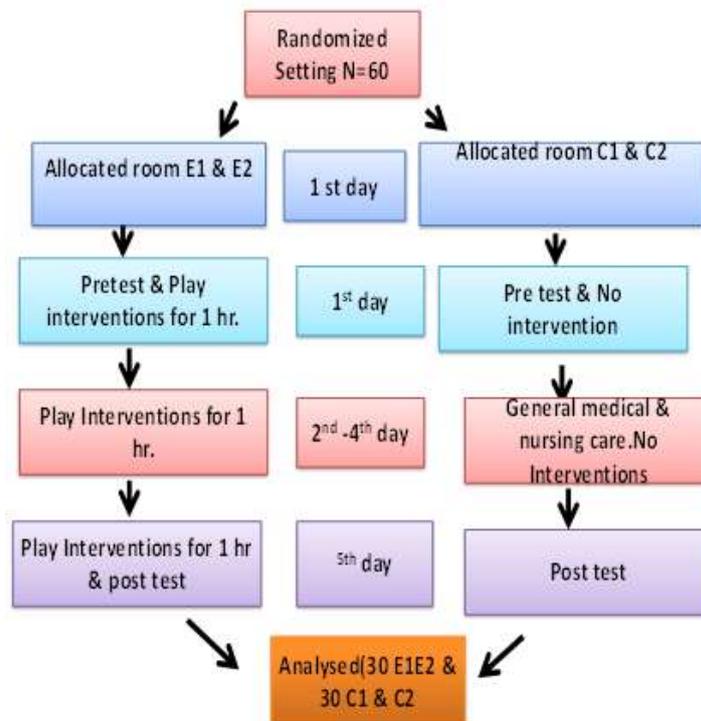


Figure no. 1: Flowchart Showing Data Collection Process

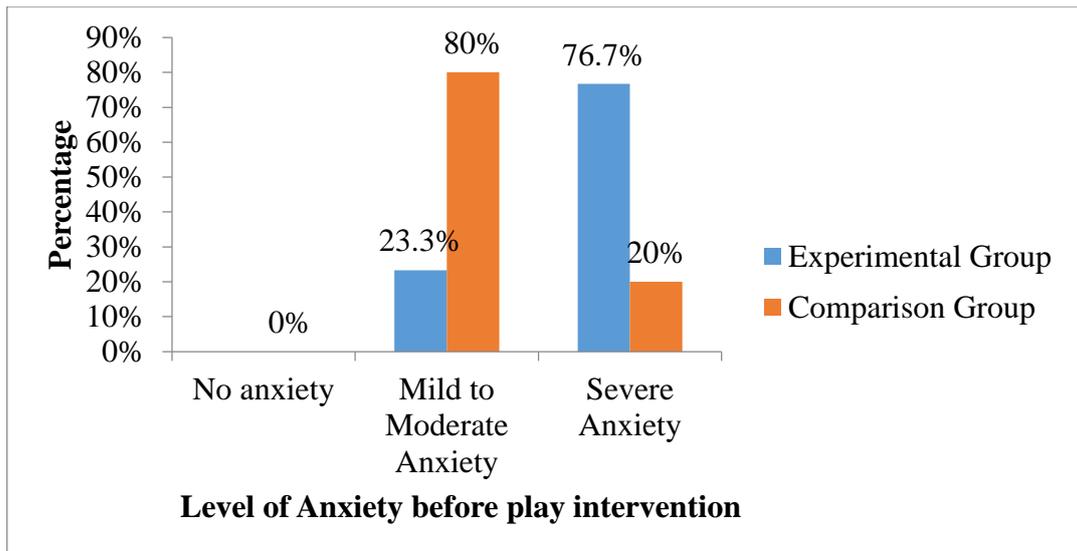


Figure No. 2: Bar Graph showing the percentage distribution of Anxiety score of Hospitalized children in experimental and comparison group before the administration of play interventions.

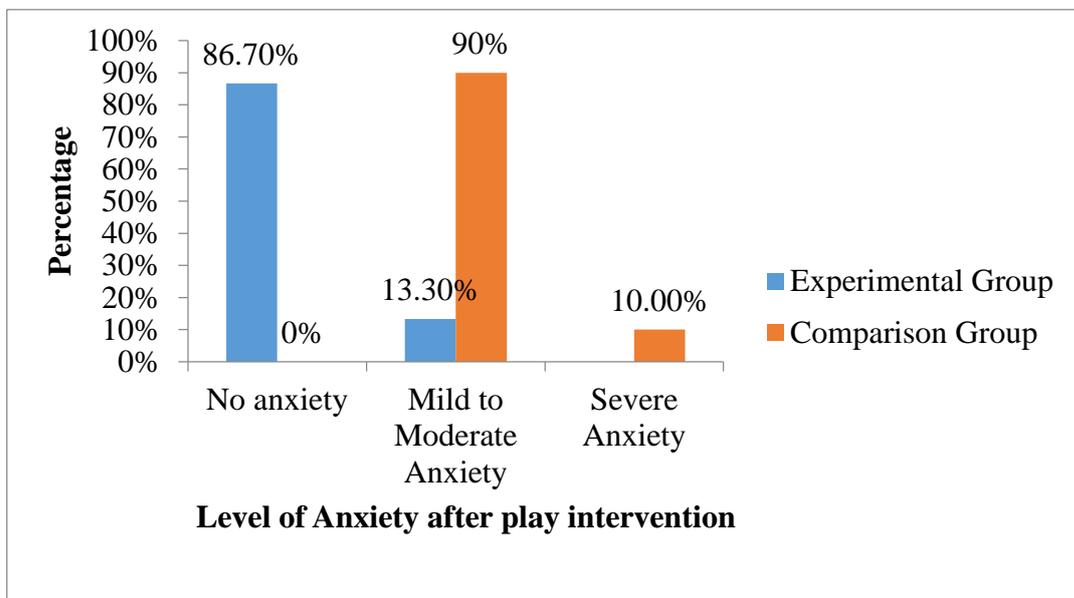


Figure No. 3: Bar Graph showing the percentage distribution of Anxiety score of hospitalized children in experimental and comparison group after the administration of play interventions.

#### Data Analysis

**Descriptive Statistics:** Frequency, percentage distribution was used to describe selected variables and Chi-square was used to assess the homogeneity between two groups.

**Inferential Statistics:** Independent t-test was used to compare the Anxiety score between two groups and Anova and independent t-test was used to find out the association of Anxiety score with selected variables of hospitalized children.

#### 4. RESULT

Homogeneity between the experimental and comparison group was checked by  $\chi^2$  test in terms of demographic and clinical variables that is Age, Gender, Religion, Education of Father, Education of Mother, Occupation of Father, Family monthly income, Place of residence, Birth Order, Type of Family, Any Medical Personnel in Family and the clinical variables include diagnosis, nature of illness, previous history of illness, duration of stay in hospital, type of treatment child is getting, any diversional or play intervention administered during procedure, knowledge of children about disease. There was no significant difference between demographic and clinical variables of experimental and comparison group at 0.05 level of significance which infers that both the group were homogenous in terms of demographic variables.

In pretest majority (76.7%) of hospitalized children had severe anxiety in experimental group whereas in comparison group majority (80%) had mild to moderate anxiety and in posttest for experimental group majority of the hospitalized children (86.7%) had no anxiety whereas in comparison group majority (90%) had mild to moderate anxiety as shown in table no. 1.

**Table No. 1: Frequency and Percentage Distribution of level of anxiety score of hospitalized children in pretest and posttest in Experimental and Comparison Group.**

N=60

Level of Anxiety	Range of Score	Experimental group (n=30)		Comparison group (n=30)	
		Pre test f (%)	Post test f (%)	Pre test f (%)	Post test f (%)
No anxiety	0-23	00	26(86.7)	00	00
Mild to Moderate Anxiety	24-45	7(23.3)	4(13.3)	24(80)	27(90)
Severe Anxiety	46-68	23(76.7)	00	6(20)	3(10)
Panic Anxiety	69-90	00	00	00	00

Maximum score: 90 Minimum score: 0

The mean anxiety score of hospitalized children in the experimental group was 20 and mean post-test anxiety score in the comparison group was 35.2. The result further shows that the computed 't' value of 12.23 was found to be statistically significant at 0.05 level of significance as shown in table no. 2. Thus suggesting that the mean difference between post-test anxiety score in experimental and comparison group was a true difference and not by chance. Hence, Research Hypothesis H<sub>1</sub> was accepted and null hypothesis H<sub>01</sub> was rejected. This indicates that play interventions were effective in reducing anxiety among hospitalized children.

**Table No.2: Mean, Mean difference, Standard Deviation Differences, Standard Error of Mean Difference and 't' value of posttest anxiety score of hospitalized children in experimental and comparison group after the administration of play interventions.**

N= 60

Group	Mean	Mean <sub>D</sub>	SD <sub>D</sub>	SE <sub>MD</sub>	t value	p value
Experimental (n=30)	20					
Comparison (n=30)	35.2	15.2	6.80	1.24	12.23	0.001*

\*significant (p≤0.05), 't' (58)=1.6 NS not significant (p> 0.05)

Association of Anxiety score with selected variables was checked by using Anova and t test among Experimental and comparison group. Anxiety score was not found to be associated with selected variables of hospitalized children in Experimental Group whereas a significant association was found with education of father (0.01), education of mother (0.01), occupation of father(0.03), family monthly income (0.04), place of residence (0.01) and type of family (0.01) and any medical personnel in family (0.04) in comparison group. Therefore the research hypothesis H<sub>3</sub> was partially rejected and null hypothesis H<sub>03</sub> was partially accepted.



## **6. CONCLUSION**

The study concluded Play Interventions are effective in reducing anxiety among hospitalized children.

## **7. ACKNOWLEDGE**

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