

# Investigating the Therapeutic Impact of Play Therapy on Pain and Anxiety: A Comprehensive Study among Hospitalized Children (Aged 8-12) in Paediatric Wards

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**Abstract:** ***Introduction:** The psychological well-being of hospitalized children is a critical concern, particularly regarding pain and anxiety management. Play therapy has emerged as a promising intervention, yet its effectiveness in addressing these challenges among children aged 8-12 in paediatric wards remains underexplored. By undertaking a thorough analysis of the therapeutic impact of play therapy, this study seeks to close this gap. **Objective:** To investigate the therapeutic impact of play therapy on pain and anxiety among hospitalized children in the age group of 8-12 years in Paediatric ward. **Methods:** Using a quantitative method, a quasi-experimental Pre-Test Post-Test control group design was implemented, involving 60 children aged 8 to 12 (30 in the Experimental group and 30 in the Control group). The samples were chosen using a straightforward random sampling procedure. The Wong Baker Faces Pain Rating Scale and the Children's Anxiety and Pain Scale (CAPS) were used to assess pain and anxiety, respectively. The Chi-Square test and the paired 't' test were used to statistically analyze the data. **Results:** The findings of present study show for experimental group the 't' test value is 24.32 and p value is 0.000 state that play therapy was beneficial in reducing the pain and anxiety level in hospitalized children in selected age group. **Conclusion:** The current study found that play therapy helps hospitalized youngsters manage their discomfort and feel less anxious. In order to lessen the worry and anguish that hospitalized children experience, nurses might include play therapy into their nursing care.*

**Keywords:** Play Therapy, Anxiety, Pain, Hospitalization, Child

## 1. Introduction

For a child, being admitted to the hospital is an extremely painful and upsetting event. Children in hospitals need to engage in more recreational play since being sick or hospitalized is a crisis in their lives. These circumstances come with a lot of stress, therefore kids need to act out their worries to help them deal with it [1]. For numerous kids, entering a hospital is akin to venturing into an unfamiliar realm. Fear and worry are the result. There are differences between hospitalizations of children and adults in terms of care [2]. Youngsters experience pain in an exaggerated manner due to their excessive anxiety and fear of the unfamiliar treatment. Giving kids the opportunity to play will help them develop coping mechanisms that will help them get through the situation. Children may experience less tension and pain during treatment and invasive testing with the use of play therapy [3]. Children in hospitals frequently endure pain, which can be detrimental to both their physical and mental health. In addition to developing dread, anxiety, and an aversion to medical procedures, children who endure pain throughout their hospital stay may also exhibit resistance to therapy and non-compliance with recommendations [4].

A nurse's role is crucial in efficiently managing and supporting the child and family while they are in the hospital. Incorporating play therapy into hospitalized children's treatment plans is known as therapeutic play [5]. Children's pain tolerance and perception of pain have been reported to decrease when diversionary tactics, including play, are used during medical procedures [6]. In addition to being essential in a child's daily life, toys also have a significant role in a hospital environment. Children can communicate their ideas,

feelings, and dreams through play, which enables them to cope with stressors more skilfully [7]. Additionally, play therapy can support kids in understanding and expressing their pain. Children can absorb and deal with their suffering by acting out their experiences and emotions via play [8]. Play therapy is a useful healthcare tactic that nurses can use with hospitalized children receiving routine care, as well as to help prepare them for surgery and other uncomfortable and upsetting treatments. Play therapy promotes social connection and fosters an optimistic outlook on other people [9]. In a study titled "Play therapy as an intervention in hospitalized children: a systematic review," Godino-Ianez MJ, Martos-Cabrera MB et al., 2020, Spain, discovered that therapeutic play lowers children's anxiety levels and lessens their post-operative pain. In addition to boosting a child's creativity and potential, therapeutic play also helps to improve a child's behaviour and attitude while they are in the hospital. Given that play therapy has demonstrated positive outcomes in the treatment of hospitalized children, it is imperative that the paediatric nurses receive sufficient training within the confines of the hospital. The researcher believes that nurses' play therapy knowledge, attitudes, and practices are significant and should be taken into account [10]. According to a study by Dierckx de Casterle et al. (2012), kids who got play therapy while they were in the hospital expressed less anxiety than kids in the control group. Therefore, it is important to understand the value and efficacy of play therapy while a patient is in the hospital [11]. This will enable the pediatric unit to make necessary modifications to provide a comfortable, engaging, and fulfilling environment that will improve the quality of care given [12].

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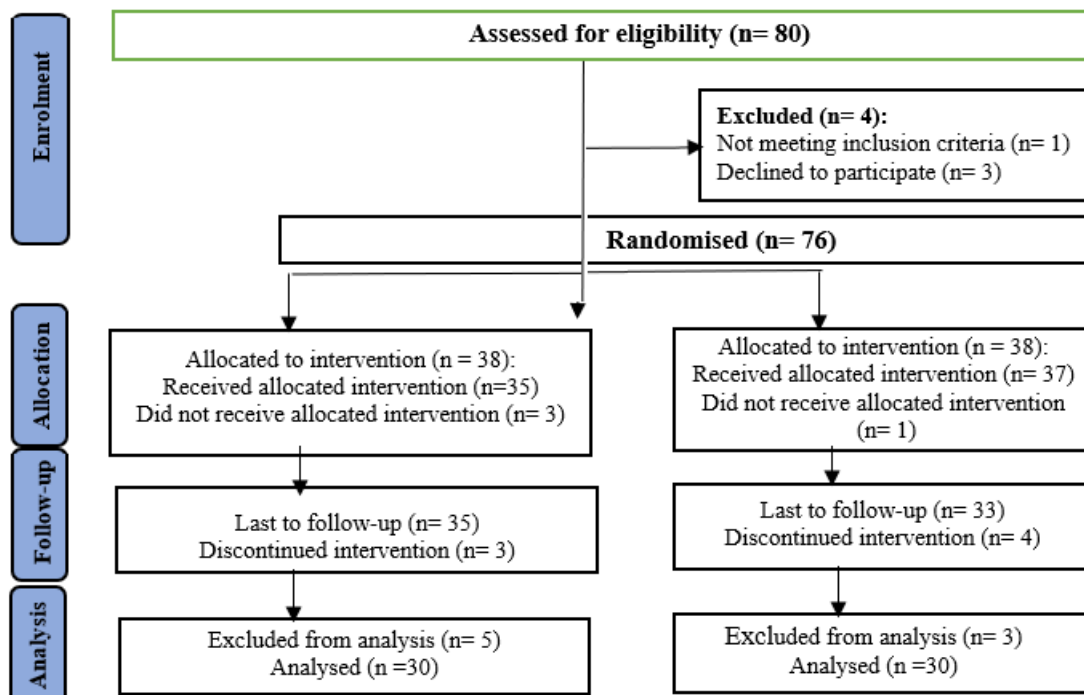
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**Objective:** To investigating the therapeutic impact of play therapy on pain and anxiety among hospitalized children in the age group of 8-12 years in Paediatric ward.

## 2. Methodology

In this study Quasi Experimental Pre-test Post-test Control group design was used to evaluate the impact of play therapy on the treatment of pain and anxiety in hospitalized children aged 8 to 12 in the paediatric ward. There are sixty hospitalized children in the 8–12 age range included in the sample size. The kids will be randomized at random to either the play therapy-receiving experimental group or the standard care-giving control group. The Children's Anxiety and Pain

Scale (CAPS) and demographic information were used to gather the data. The CAPS is a self-report tool that uses 15 items on a 5-point Likert scale to gauge children's anxiety and discomfort levels. Both before and after the session, the kids filled out the questionnaire. For two weeks, the experimental group had three sessions of play therapy lasting thirty minutes each. The standard treatment given to the control group consisted of pharmaceutical interventions and diversion during medical procedures. To analyze the data, both inferential and descriptive statistics were applied. The comparison of the experimental and control groups' pre- and post-test findings allowed for the evaluation of play therapy's effectiveness in treating pain and anxiety. A p-value of 0.05 was considered to demonstrate statistical significance.



**Figure 1:** Diagram showing the progression of two groups participating in a parallel randomized study (enrollment, allocation of the intervention, follow-up calls, and data analysis).

## 3. Results

As shown in Table 1 in the present study majority 58.33% of children belong to 8-9 years and 41.66% of children belong to 10-12 years of age. Majority 66.66% of the subjects were male whereas 33.33% of subjects are female. Most (41.66%) of sample were studying in 4th standard and (25%) were studying in 5th standard. Majority (75%) belong to Hindu religion, (16.66%) belong to Muslim religion & (8.33%) belong to other religion. Most (51.66%) of subjects were having history of hospitalization and (48.33%) of subjects were having no history of previous hospitalization.

**Table 1:** Findings related to the sample distribution in relation to the demographic data, n=60

Variables	Intervention Group, n (%)	Control Group, n (%)	Total n %
<b>Age group</b>			
8-9 years	19 (63.33)	16 (53.33)	58.33
10-12 years	11 (36.66)	14 (46.66)	41.66
<b>Gender</b>			
Male	18 (60)	22 (73.33)	66.66
Female	12 (40)	8 (26.66)	33.33
<b>Religion</b>			
Hindu	21 (70)	24 (80)	75
Muslim	6 (20)	4 (13.33)	16.66
Others	3 (10)	2 (6.66)	8.33
<b>Education(Class)</b>			
4	12 (40)	13 (43.33)	41.66
5	9 (30)	6 (20)	25
6	5 (16.66)	8 (26.66)	21.66
7	4 (13.33)	3 (10)	11.66
<b>History of hospitalization</b>			
Yes	13(43.33)	18 (60)	51.66
No	17(56.66)	12 (40)	48.33

**Table 2:** Findings related to distribution of groups to assess level of anxiety, level of pain and

Variables	Control Group <i>mean±SD</i>	Intervention <i>mean±SD</i>	<i>p</i> -value
<b>Anxiety</b>			
Pre-test	43.4±7.06	43.2±7.06	0.21
Post-test	42.57±7.06	26.6±7.06	<0.0001
<i>p</i> -value	1.00	0.0001	
<b>Level of pain</b>			
Pre-test	6.4±1.61	6.60±6.35	0.07
Post-test	5.8±1.51	2.46±7.78	<0.0001
<i>p</i> -value	0.10	0.0001	

The findings in Table 2 show that in control group the average score of pre-test was minimum 28 & maximum 53, mean and SD was 43.4+7.06. Whereas the average post test score was 28 minimum and 53 maximum, mean & SD was 42.57 + 7.06 respectively. The control group pre -test & post test score is almost similar.

The findings in Experimental group shows pre -test score minimum as 28 & maximum is 52, mean & SD was 43.2 + 6.35 respectively. The post- test score was minimum 12 and maximum 46, mean & SD was 26.6+7.78 respectively.

The findings show that in control group the average score of pre-test was minimum 2 and maximum 8, mean & SD was 6+1.61. Whereas the average post- test score was 2 minimum and 8 maximum, mean & SD was 6 +1.52 respectively. The control group pre -test and post test score is almost similar.

The findings in Experimental group shows pre -test score was minimum 4 & maximum 8, mean &SD was 7 + 1.42 respectively. The post- test score was minimum 0 & maximum 6, mean & SD was 2 +1.36 respectively.

The result of the present study reveals for experimental group where 't' value is 24.32 and p value is 0.000 is significant (<0.05) hence research hypothesis was accepted.

#### **Effectiveness of play therapy on level of anxiety: -**

- According to the data, the pre-test mean score for the control group was 43.4+7.06, with a minimum of 28 and a maximum of 53. The post-test results had a mean score of 42.57 + 7.06, a standard deviation of 28 and a maximum score of 53. For the control group, the pre- and post-test findings are nearly the same.
- The pre-test mean and SD for the experimental group were 43.2 + 6.35, with a lowest score of 28 and a highest score of 52, according to the results. The post-test results showed a minimal score of 12 and an elevated score of 46, with a mean and standard deviation of 26.6+7.78.

#### **Effectiveness of play therapy on level of Pain: -**

- The results indicate that the control group's pre-test average score ranged from a minimum of 2 to a maximum of 8, with a mean and SD of 6+1.61. The mean and SD of the post-test scores were 6 +1.52, although the average score was 2 minimum and 8 highest. The pre- and post-test results for the control group are essentially identical.
- The pre-test score for the experimental group was 4 at the lowest and 8 at the highest, with a mean and SD of 7 + 1.42, respectively. The post-test score ranged from 0 to 6, with a mean of 2 and a standard deviation of 1.36.

**Table 4:** To Correlate Effect of Play Therapy with Pain and Anxiety

Group	Correlation	Pearson correlation	P-value
Experimental	Pretest –Post Test	0.879	0.000
Control	Pre Test –Post Test	0.990	0.000

The findings show that for control group and experimental group the p values are 0.000<0.05. This shows that there is a positive correlation of score.

## 4. Discussion

This research aims to ascertain the efficacy of play therapy in the management of pain and anxiety in hospitalized 8–12-year-old children in specific Pune metropolitan hospitals' pediatric wards. To achieve the desired outcome, the researcher employed the Wong-Baker Faces Pain Rating Scale, the Children's Anxiety and Pain Scale (CAPS), and demographic traits to collect data. The CAPS is a self-report tool that assesses children's pain and anxiety using 15 items on a 5-point Likert scale. This tool's validity was further confirmed by fifteen experts in the fields of clinical and educational research. In order to assess the feasibility of the inquiry, subjects were chosen in accordance with the sample criteria. The investigation was carried out on 60 children

The aforementioned results are in line with those of Deshpande Renuka, et al. (2019), who carried out an experimental study to evaluate the impact of play therapy and traditional physiotherapy on post-operative children's pain and anxiety. They found that average pre-test score of SCARS as 35.5+1.5 and that of WBPS was 3.6+1.5. Whereas, the post-test scores are 32.4+1.5 and 3+1, respectively. The value of P was found to be <0.01. The study concludes that the interventions, i.e., conventional physiotherapy and play therapy were effective in pain and anxiety reduction in post-operative children [13].

The results aligned with the research of Pajapati, K., et al. (2019), which evaluated the impact of play therapy on anxiety in hospitalized children. The results showed that the mean post-test score and pre-test score varied. The anxiety level's "t" value, which was 13.66, was at the significant level (p<0.001). The study found that hospitalized children's anxiety levels significantly decreased when play therapy was used [14].

## 5. Implications

The practice of nursing will be significantly impacted by this study. When used as a non-invasive, low-cost intervention, play therapy can help hospitalized children manage their pain and anxiety, which can enhance their general recovery and well-being. This study can add to the increasing amount of data that supports play therapy's application in pediatric settings.

## 6. Limitations

This study is not without limits, though. The study will be conducted in a single setting and the sample size is rather small, which will restrict the generalizability of the results.

Additionally, the study design might not provide the control of confounding variables, and social desirability bias could have an impact on self-report questionnaires.

## 7. Conclusion

Pain and anxiety are commonplace in hospitals for children, and this can substantially impair their capacity to heal. Play therapy has demonstrated potential as an intervention for pain and anxiety management in pediatric settings. The goal of this research is to assess how play therapy affects the way hospitalized 8–12-year-old children in the pediatric ward handle their pain and anxiety. The study's findings provide credence to the effectiveness of play therapy as an intervention for children in hospitals, helping them to effectively manage their pain and anxiety. Nurses can help hospitalized children heal and feel better overall by using play therapy. Further research may look into the long-term effects of play therapy on the management of pain and anxiety in hospitalized children.

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### Ethical Considerations

Approval from the institutional research committee and consent from the relevant hospital authorities, where the sample was gathered, were acquired for the research. After being given adequate information about the goal and methodology of the study, the participants signed a written informed consent form. The confidentiality of the sample was upheld.

**Declaration of consent:** Participants gave their consent.

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