

Effectiveness of play therapy in level of pain among hospitalized children in selected hospital, Chennai.

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ABSTRACT

Play therapy has emerged as a transformative non-pharmacological approach for managing pain in hospitalized children. **Aim:** The aim of the study to evaluate the Effectiveness of play therapy in level of pain among hospitalized children in selected hospital, Chennai. **Methodology:** A pre-experimental research design was adopted to assess the effectiveness of play therapy in reducing pain levels among hospitalized children at Sri Balaji Medical College and Hospital, Chennai. The study focused on children aged 8 to 12 years who were admitted to the pediatric ward with moderate to severe pain. A total of 120 participants were selected through purposive sampling based on specific criteria. Children included were those who could verbally or visually communicate their pain levels, while those with chronic illnesses, medically unstable conditions, or under sedation were excluded from the study. **Result:** The study showed a significant reduction in pain scores after play therapy, with mean scores dropping from 7.01 to 4.51 ($p < 0.001$). Most demographic factors showed no significant association with pain reduction. However, parental education level was significantly linked to better pain outcomes ($p = 0.0001$). **Conclusion:** The study concluded that play therapy was found to be an effective non-pharmacological intervention in reducing pain among hospitalized children. The significant improvement in post-test pain scores highlights its therapeutic value. Parental education played a key role in influencing the effectiveness of the intervention.

INTRODUCTION

Play therapy has emerged as a transformative non-pharmacological approach for managing pain in hospitalized children. A systematic review indicated that play therapy significantly reduces pain levels and anxiety in young patients, thereby enhancing their overall hospital experience (Godino-láñez et al., 2020; . Specifically, interventions using medical materials have demonstrated a notable reduction in pain levels in preschool children, reinforcing the relevance of play therapy as a viable pain management strategy (Pangalila et al., 2024). Empirical evidence supports the effectiveness of play therapy in various pediatric contexts. A study on children who underwent general surgeries highlighted the efficacy of play therapy, showing a reduction in pain levels from predominantly moderate to mild following the intervention (P et al., 2024; . This aligns with another study where significant pain reductions were observed after storytelling play therapy among children with leukemia, further supporting the role of engaging activities in pain alleviation (Rahayu et al., 2023). Moreover, interventions utilizing diverse play techniques, including puppet play, suggest that these methods successfully decrease postoperative pain, contributing to children's coping strategies during hospital stays (Kurt & Seval, 2021). The application of distraction techniques through play has been shown to effectively mitigate pain experiences during medical procedures, which is particularly beneficial in pediatric settings (Amaliya et al., 2021). In pain management, incorporating play therapy not only

enhances pain relief but also improves behavioral outcomes during hospitalization (Godino-láñez et al., 2020; Vries, 2022). A qualitative study emphasizes the importance of proper implementation by trained medical professionals to maximize the benefits of play therapy. Ensuring that pediatric nurses and caregivers are trained in these play interventions can facilitate effective pain management tailored to pediatric patients' unique needs (Aziznejadroshan et al., 2016).

The overarching conclusion, supported by the existing literature, is that play therapy represents a critical component of pain management for hospitalized children. By fostering a joyful and engaging environment through play, healthcare providers can substantially mitigate pain and improve the psychological well-being of young patients during their hospitalizations (P et al., 2024; Plummer et al., 2023). Future efforts should focus on integrating these therapeutic play strategies into routine clinical practice while ensuring that healthcare professionals receive the necessary training for effective implementation.

AIM OF THE STUDY

The aim of the study to evaluate the Effectiveness of play therapy in level of pain among hospitalized children in selected hospital, Chennai.

METHODOLOGY

Study Design and Setting

An pre experimental research design was adopted to evaluate the effectiveness of play therapy in reducing the level of pain among hospitalized children. The study was conducted at Sri Balaji Medical College and Hospital, Chennai, in the pediatric ward setting.

Study Population and Sampling Technique

The study included children aged 8 to 12 years who were admitted to the selected hospital and experiencing moderate to severe pain. A purposive sampling technique was used to select 120 participants based on inclusion and exclusion criteria.

Inclusion Criteria

- Children aged 8-12 years.
- Children admitted to the pediatric ward and experiencing observable pain.
- Children who could communicate pain levels verbally or visually.

Exclusion Criteria

- Children with chronic illnesses or long-term medical conditions.
- Children who were medically unstable or under sedation during the study period.

Ethical Considerations

Informed consent was obtained from the mothers or legal guardians of each child prior to data collection. Participants were assured of confidentiality, voluntary participation, and the use of data for academic purposes only.

Intervention Procedure

Each child was first assessed using a Visual Analog Pain Scale (VAPS) to determine their baseline pain level (pre-test). They were then engaged in a structured therapeutic play session designed to promote distraction, relaxation, and emotional expression. Immediately after the session, the child's pain level was reassessed using the same VAPS (post-test).

Data Collection Tools

- Demographic Proforma: To gather background information such as age, gender, diagnosis, and duration of hospitalization.
- Visual Analog Pain Scale: Used pre- and post-therapy to assess pain intensity.

Statistical Analysis

Data were entered and analyzed using SPSS version 25.

- Descriptive statistics (mean, standard deviation, frequency, and percentage) were used to summarize demographic data.

Table 1: Demographic Characteristics of Participants

Demographic Variable	Frequency	Percentage (%)
Age		
8-9 years	40	33.33%
10-11 years	50	41.67%
12 years	30	25.00%
Gender		
Male	65	54.17%
Female	55	45.83%
Reason for Hospital Admission		
Infection	45	37.50%
Injury	40	33.33%
Surgery	35	29.17%
Duration of Hospital Stay		

- Inferential statistics such as the paired t-test (for normally distributed data) were used to compare pre-test and post-test pain scores, determining the effectiveness of play therapy.

RESULTS

Demographic variables

The demographic profile of the 120 hospitalized children revealed that the majority were aged between 10-11 years (41.67%), followed by 8-9 years (33.33%) and 12 years (25%). In terms of gender, 54.17% were male and 45.83% were female. Regarding the reason for hospital admission, infections accounted for the highest proportion (37.5%), followed by injuries (33.33%) and surgeries (29.17%). Half of the children (50%) had a hospital stay duration of 3-5 days, while 25% stayed for less than 3 days and the remaining 25% for more than 5 days. Concerning parental education, 45.83% had completed secondary education, 33.33% had higher education, and 20.83% had only primary education. Previous hospitalizations were reported in 58.33% of cases, with 41.67% having no prior admissions, 37.5% hospitalized once or twice before, and 20.83% having three or more previous admissions. (Table 1)

Visual Pain Score

The findings from the Visual Analog Pain Scale revealed a significant reduction in pain scores following play therapy. The mean pre-test pain score was 7.01 with a standard deviation of 1.01, whereas the post-test mean score dropped to 4.51 with a standard deviation of 0.94. The calculated t-value was 23.59 with a p-value of <0.001, indicating a statistically significant improvement in pain levels after the intervention. (Table 2)

Association

The association between demographic variables and post-intervention pain scores was assessed using the Chi-square test. Most variables, including age, gender, reason for admission, duration of hospital stay, and number of previous hospitalizations, did not show a statistically significant association with pain score reduction ($p > 0.05$). However, parental education level demonstrated a significant association with pain score reduction ($\chi^2 = 17.89$, $p = 0.0001$), indicating that higher parental education may influence the child's pain response and coping mechanisms during hospitalization. (Table3)

Less than 3 days	30	25.00%
3-5 days	60	50.00%
More than 5 days	30	25.00%
Parental Education Level		
Primary	25	20.83%
Secondary	55	45.83%
Higher	40	33.33%
Previous Hospitalizations		
None	50	41.67%
1-2 times	45	37.50%
3 or more times	25	20.83%

Table 2: Visual Pain Score (Pre-Test and Post-Test Scores)

	Mean	Standard Deviation	t-value	p-value
Pre-Test	7.01	1.01	23.59	<0.001
Post-Test	4.51	0.94		

Significant $p < 0.05$

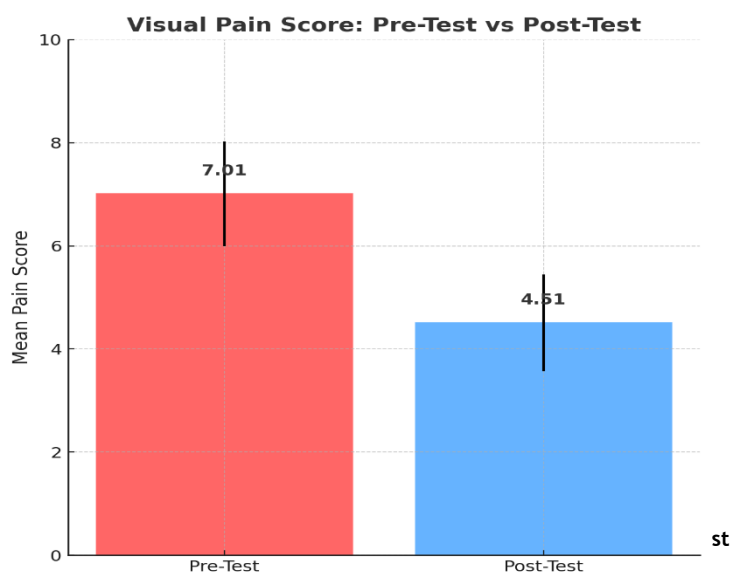


Table 3: Association Between Demographics and Pain score.

Demographic Variable	Chi-square	p-value	Significance
Age	0.76	0.6832	Not Significant
Gender	2.11	0.1459	Not Significant

Admission Reason	0.42	0.8093	Not Significant
Hospital Stay Duration	5.71	0.0574	Not Significant
Parental Education Level	17.89	0.0001	Significant
Previous Hospitalizations	1.65	0.4381	Not Significant

*Significant $p < 0.05$

DISCUSSION

The study aimed to assess the effectiveness of play therapy in reducing pain levels among hospitalized children using the Visual Analog Pain Scale. The effectiveness of play therapy in reducing pain levels among hospitalized children presents significant findings, revealing a statistically significant reduction in pain scores post-intervention. The baseline pain score averaged 7.01 (SD = 1.01), indicating a high level of discomfort, which decreased to an average of 4.51 (SD = 0.94) after the application of play therapy. The paired t-test results, with a t-value of 23.59 and a p-value of <0.001 , provide strong statistical evidence supporting the hypothesis that play therapy is effective in alleviating pain in this demographic (Godino-láñez et al., 2020).

This reduction aligns with observations made in other studies, indicating that play therapy diminishes pain associated with invasive medical procedures and enhances children's coping mechanisms related to hospitalization (Pangalila et al., 2024). In particular, a comparative study found that play, particularly through medical materials such as syringes and gloves, effectively alleviated pain in young patients undergoing treatments, further corroborating the novel application of play therapy in clinical settings (Pangalila et al., 2024).

Interestingly, while the overall effectiveness of pain reduction was affirmed, factors such as age, gender, the reason for hospital admission, duration of stay, and previous hospitalizations did not show significant correlations with pain reduction levels. This finding suggests that play therapy's effects may be broadly applicable across various demographics within the pediatric patient population, which is a compelling element for clinicians considering its implementation (Amaliya et al., 2021).

However, the association between parental education levels and pain reduction is noteworthy and warrants further discussion. Children whose parents possess higher educational attainment responded more positively to play therapy. This link may indicate that parents with greater education are perhaps more informed and supportive in engaging their children during therapeutic interventions, or creating an environment conducive to the benefits of play (Aziznejadroshan et al., 2016). The dynamics of parental involvement in therapeutic contexts could be a significant aspect that warrants additional investigation to understand how it influences treatment outcomes.

Moreover, the results resonate with the literature suggesting that non-pharmacological interventions like play therapy contribute substantially to improving the comfort and overall hospital experience for children (Godino-láñez et al., 2020). Systematic reviews confirm the premise that play therapy not only alleviates pain but also fosters positive psychological outcomes, aligning with the idea that children experience significant benefits from developmentally appropriate distractions that engage them during painful procedures (Ghasemi et al., 2021).

CONCLUSION

In conclusion, the findings underscore the importance of integrating play therapy into routine pediatric practices to effectively address pain management in hospitalized children. The overall benefits of play therapy as a pain-management strategy resonate across multiple studies, reinforcing the need to adopt such interventions to improve children's healthcare experiences comprehensively.

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