

Effect of art therapy and play therapy on anxiety among hospitalized preschool children

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ABSTRACT

Background

Play is a tremendous method of communication, expansion of social relationship and communal understanding. Admission into the hospital leads to anxiety and strain for children due to alteration in the settings and their health conditions. Children suffer from separation anxiety; they are not cooperative and do not allow nurses to do any invasive procedures. So the study aimed to find out the anxiety level and role of art and play therapy to overcome it.

Material and methods

Sixty preschool hospitalised children were selected for the study. Data were collected through a self-structured questionnaire on socio-demographic and hospitalisation anxiety scale. Descriptive and inferential statistics were used to analyse the data.

Results

The study findings revealed that 75%, 20% and 5% of children had moderate, severe and mild anxiety during hospitalisation. There was a significant difference observed between pre-test and a post-test mean score of anxiety level in art and play therapy at $p < 0.0001$. A significant relationship was observed between the duration of hospitalisation and anxiety level.

Conclusion

The present study's findings conclude that art therapy and play therapy are cost-effective, convenient, and require less skill to reduce anxiety among hospitalised preschool children.

Keywords

Anxiety, art therapy, India, play therapy, preschool children

Background

Hospitalization compels a child to leave their home, family members, alteration in the settings and own comfort zone. [1]. Children need to be hospitalized and stay as an inpatient due to emergencies in which the child needs to halt in the sanatorium to go through the management of diseases. It causes anxiety, fear, pain, loss of control, safety, and emotional problems in a child [2, 3]. The children's anxiety needs to be addressed; otherwise, the fear and apathy developed by the child will result in rejection to take medication, nursing care, and delay hospital stay. All these will deteriorate their health condition and lead to the disease's severity [4, 5]. Ample research is done to minimize the level of anxiety. Play and art therapy are two of them, and it can overcome the challenges because it builds on the natural way children learn and express themselves – e.g. playing and being creative. Children get the chance to express themselves through play. Play helps in communication, expansion of social relationship and communal understanding. [6]. Art therapy is a method of communication, which is figurative. It aids to bring a novel way of thinking, express emotions, and eventually lead to a new value-added lifestyle [7].

It provides opportunities for non-verbal communication and uses as a vehicle for self-expression, communication and growth. The art therapist is concerned with the individual's inner experience. During art and play therapy sessions, a therapist and child involve together in a playroom. Materials and toys are carefully chosen, which will potentially symbolize different parts of the child's inner experience. Play is a form of a structured method of activities which are designed as per the age-appropriate, for the overall development and improvement in the health condition of the child [8]

Parent's active involvement is beneficial for achieving the most favourable treatment effects. It gives an insight and understanding to the parents about their child's mindset, coping skills, and specific developmental level, which helps in specific developmental support augmenting the child's wellbeing.

39,1,90,400 is the aggregate population of teenagers in India, and about 30% of children are hospitalized at least once during their childhood. About 5% of them are hospitalized several times, 12% from children below five years of age. [9]

Before reaching the age of 5 years old, at least one out of every four teenagers get admission into hospital. Anxiety is not only confounded in children; 60% of the hospitalized teenagers demonstrate symbols of tension and anxiety behaviour. Utilization of play activities in hospitals must be mandatory in the effective utilization of current trends and practice in paediatric nursing care: atraumatic care. It is a concept which includes various strategies that reduce or minimize the discomfort faced by the patients and their belongings during a hospital stay. There are relatively fewer research works done from India, so the current paper aimed

to assess anxiety among hospitalized preschool children and reduce it to improve the quality of life with interventions.

Material and methods

Study design and the participants

This was a hospital-based comparative study conducted in the Capital Hospital from 23.01.18 to 17.02.18. The present study was done in pre-school children aged 3 to 6 years who are admitted in pediatric ward of Capital Hospital. Questionnaire was developed for demographic details and measurement of the severity of anxiety. Two different experimental groups were instructed for art therapy and play therapy for 30 minutes, three consecutive days. Post-test was done on the fourth day; the questionnaire measured anxiety level.

Questionnaire design and data collection

A structured questionnaire was used to obtain the data on socio-demographic details. The data were collected by interview with the parents. Self-structured hospitalization anxiety scale was developed to measure the severity of anxiety symptoms. The scale consists of 16 items, scored on a scale 0 (never) to 3 (severe) with a total score range of 0-48. Where 0-12 indicates no anxiety, 13-24 indicates mild anxiety, 25-36 indicates moderate anxiety, 37-48 indicates severe anxiety. Anxiety level was assessed before and after the test.

Content validity of the questionnaire

Questionnaire on socio-demographic and hospitalization anxiety was given to five subject experts of relevant departments of Capital Hospital (Pediatrics, pediatric nursing, psychiatry) to ensure content validity and language clarity. After receiving the feedbacks, the appropriate modification was done. The tool (self-structured Hospitalization anxiety scale) was measured in terms of Chronbach's alpha; which was 0.84, considered good and reliable.

Inclusion criteria

Children who were present at the time of data collection understand Odia and Hindi and willing to participate in the study were included.

Exclusion Criteria

Children who had limited motion in the upper extremity (unable to move right and left hands to draw or play a puzzle), critically ill and experienced extreme pain levels were excluded from the study.

Sample size calculation

To achieve an effect size of 30% with an α error of 0.05 and power, 80% of the sample size was 54. On average, 5-6 patients were admitted per week. Considering the time and feasibility of the study, about 60 subjects were considered for the study.

Sampling technique

Random Sampling Technique was used in this study. Investigators used a lottery method, where each member of the study population was assigned a number, after which the numbers were selected at random.

Data management and statistical analysis

We performed descriptive and inferential statistics for this research. T-test, ANOVA and Chi-square test was performed to find an association between the variables. Data were analyzed using the Statistical Package of Social science (SPSS) version 16. $p < 0.05$ was considered to be statistically significant.

Ethical committee approval

The research committee approved the present research, and ethical clearance was taken from Capital Hospital, Odisha. Permission was also obtained from the research committee of the Sum Nursing College. Informed consent was taken from the participants' parents; confidentiality and anonymity of data were maintained throughout the research work.

Results

Majority (50%) children of 4-5 years of age group belong to art therapy, whereas 65% of male participants belong to art therapy, considering in terms of habitat 55% children belongs to art therapy and play therapy, in terms of the type of illness 50% of children belongs to control group, 55% of children from play therapy and control group belongs to the previous history of hospitalization and considering the duration of hospital stay 55% of children stayed for 3-4 days belongs to control group.

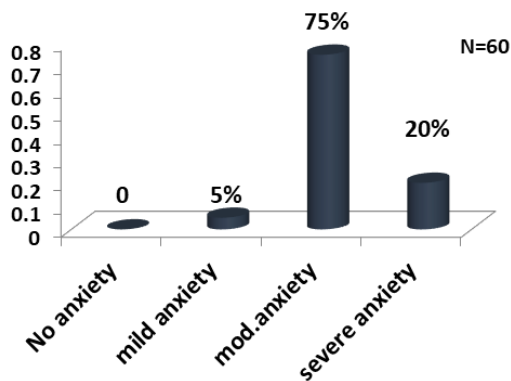


Fig. 1 Assessment of the anxiety level of the Preschool hospitalized children in terms of frequency and Percentage distribution

In terms of level of anxiety 75% children had moderate anxiety, 20% had severe anxiety whereas 5% had mild anxiety among preschool children during hospitalization.

Table 1: Effect of art therapy on the level of anxiety amongst the children

Anxiety level	Art therapy	Mean±SD		P value
		Pre test	Post-test	
Anxiety level	Experimental	33±4.58	19.5±3.68	0.0001*
	Control	31.5±3.73	29.8±3.76	0.11

* $p < 0.01$, statistically significant

Table 1 depicts the effect of art therapy on the level of anxiety amongst the children. The experimental group anxiety level significantly reduced after art therapy (p value 0.0001), whereas for the control group, anxiety level remained almost the same.

Table 2: Effect of play therapy on the level of anxiety amongst the children

Anxiety level	Play therapy	Mean±SD		P value
		pre test	Post-test	
Anxiety level	Experimental	33.1±4.07	17.8±3	0.0001*
	Control	31.5±3.73	29.8±3.76	0.11

* $p < 0.01$, statistically significant

Table 2 depicts the effect of play therapy on the level of anxiety amongst the children. Play therapy significantly reduced anxiety in the experimental group (p value 0.0001), compared with the control group.

Table 3: Comparison of post-test result by Anova of anxiety level between art therapy play therapy and control group

Anxiety level	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Play therapy	20	1.95	.224	.050	1.85	2.05	1	2
Art therapy	20	2.10	.308	.069	1.96	2.24	2	3
Control group	20	2.25	.444	.099	2.04	2.46	2	3
Total	60	2.10	.354	.046	2.01	2.19	1	3

Anxiety level	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.900	2	.450	3.946	0.025
Within Groups	6.500	57	.114		
Total	7.400	59			

Table 3 depicts mean score of post-test of play therapy (1.95), art therapy (2.1) and control group (2.25) of anxiety level. Play therapy was significantly more effective (p value 0.025) than art therapy.

Discussion

Anxiety and fear of a hospitalized child is a significant challenge for nursing staff to take care. [10] For preschool children, hospitalization is a frightening experience was evident [11], and it may go upto 53% of cases [12].

Caregivers try to do their best to alleviate the adverse situation but find difficulty. Playing is considered one of the nursing actions to ease the psychological impact of hospitalization stress. For children, play is a routine job. Playing is an activity that is done voluntarily, and there is no compulsion or pressure from outside or liabilities [13]. Play acts as a connection between physical, intellectual, emotional behaviour of a child – a platform to communicate, an easier way to adapt to the environment [14].

Effect of play therapy in reduction of anxiety

The present study findings reveal a significant difference in anxiety level among preschool hospitalized children after administering play therapy. Our results are similar to another study by Ghabeli et al. Authors found that the experimental group had lower mean preoperative anxiety scores ($P < 0.001$) compared to the control group. Mean anxiety scores of the children and mothers in the experimental group were lower. There are six points involved in theoretical models of Play therapy: the therapeutic relationship, the diagnostic opportunities, breaking down defense mechanisms, facilitating articulation, therapeutic release, and anticipatory preparation [15, 16]. Three crucial domains - cognitive, affective, and interpersonal influence the processes mentioned above. The cognitive domain is associated with awareness and domination of beliefs and ideas which modifies with skill development, schema transformations, and symbolic exchanges. The affective domain, related to emotion regulation, uses processes such as the abreaction of affective education; the interpersonal domain, related to relations and support, can include processes such as support and validation and the corrective relationship with the therapist. We believe that these domains were influenced in our research which causes a lower level of anxiety among the children. This is also to be mentioned that our results show that play therapy was significantly more effective (p value 0.025) than art therapy. The probable explanation is that more influence on cognitive, affective, and interpersonal influence acts as a more relaxing effect than play therapy.

Effect of art therapy in reduction of anxiety

We found a significant difference in anxiety level among preschool hospitalized children after administering art therapy. Our finding corroborates similar studies by Wowiling et al. [17] and Pravitasari et al. [18]. They used colouring techniques as a form of art therapy that is performed at preschool-age children to reduce anxiety. Our results contradict the findings of Purwandari et al. art

therapy was unable to reduce the level of anxiety but lowered the pulse rate. The variation is observed because of age differences. Purwandari et al. have taken school-age children, 6 - 12 years, whose psychological status differed from our study population, i.e. preschool children. [19]. We got significance in our study, which supports that art therapy is a significant distractor, unique way to dissipate anxiety in hospitalized children in patients. Drawing or colouring reduces tension and a kind of relaxation effect on the body. It can provide emotional stimuli in the limbic system that occurs in the hypothalamic control of maladaptive behaviour, including anxiety responses.

Conclusion

Art therapy and play therapy can be adopted for hospitalized children because it is a part of their everyday routine activity and excitement to explore things. As we found play therapy was significantly more effective than art therapy so we can prioritize it. Both the therapies are cost-effective, convenient, requires fewer skills. This innovative therapeutic regimen can alleviate children's anxiety level, helping healthcare providers serve better.

Limitation and future scope of the study

This study can be replicated in other hospital settings with more participants.

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Authors' contribution

- a. Study planning: DSR, NGR, PR
- b. Data collection: DSR, NG
- c. Data analysis/ interpretation: DSR, NGR
- d. Manuscript writing: DSR, PR
- e. Manuscript revision: DSR, NGR
- f. Final approval: DSR, NGR, PR
- g. Agreement to be accountable for all aspects of the work: [Type all authors] DSR, NGR, PR

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Availability of data and materials

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Competing interests

None declared.

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