

An RCT on Effectiveness of play therapy on anxiety among hospitalized children in selected hospital, Greater Noida

Rekha Chhillar¹ , Preeti Dabas², Sunil K.Dular³

¹ Lecturer, Faculty of Nursing Sgt University Gurugram Haryana

² Lecturer, School of Nursing Sharda University Greater Noida

³ Associate Professor Faculty of Nursing Sgt University Gurugram Haryana

Corresponding Author

Rekha Chhillar
Lecturer, Community Health Nursing
Faculty of Nursing
SGT University,
Budhera ,Gurugram-122505, Haryana
Email: rekha_nursing@sgtuniversity.org

ABSTRACT : During a serious illness, even older children have a great need for their parents and can tolerate their absence only for short periods. Anxiety is the most commonly reported of these negative responses among children and high levels of anxiety can be harmful to child's physiological and psychological health. To overcome the anxiety, 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. The study aim was to assess and compare the level of anxiety after administration of play therapy among hospitalized children in experimental and control group and to determine the association of anxiety among hospitalized children with selected variables. In this study a Quantitative approach with True Experimental control post test design was used. Simple Random sampling technique was used to select the sample size of 60 children. Children were randomly allocated in experimental and control group. Data was collected from parents or care taker of children for control and experimental groups by using Hamilton Scale of anxiety. The study concluded that the mean anxiety score of children receiving play therapy during hospitalization was significantly less as compared to the mean anxiety score of control group. Therefore, play therapy while hospitalization was effective in reducing anxiety.

KEY WORDS: Anxiety, Play therapy

INTRODUCTION

World Health Organization (WHO) defines Health, a state of complete physical, mental and social wellbeing 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”.¹ Health is the precious possession of all the human beings as it is an asset for an individual and community as well.² Hospitalization is stressful for children of all ages. When a child is admitted in the hospital, anxiety both for the disease and for the imminent surgical procedure may be the first component of the crisis the child is faced with. Thus, surgical anxiety is an answer to the fear of hospitalization, disease, anaesthesia and surgery,⁴ while paediatric anxiety is associated with a high frequency of post-operative stress of fear, separation, eating and sleep disorders.⁵ Anxiety is the most commonly reported of these negative responses, and high levels of anxiety can be harmful to children’s physiological and psychological health. Excessive anxiety also implies children’s efficacy in coping with medical treatment and increases their uncooperative behaviour and negative emotions towards healthcare professionals.⁶ The pharmacological and non-pharmacological therapy is used to reduce the anxiety of the child.

⁹Play 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.¹⁰ Play promotes healing and helps the child to cope with stressful experiences. Children Won fear treatments are helped to release their feelings in their use of falls and other toys.

NEED OF THE STUDY

Play - when one thinks of play, one immediately thinks of fun and children. But what one does not realize is the scope of influence it has on the growth and development of a child stored within its realms. Play happens to be the business for children. Its purposes are numerous intellectual and motor developments, creativity and development of higher functions, play has been known to divert

child's mind. E.g. A crying child will stop crying when a toy is given to play. The value of play to a sick child in the hospital has long been recognized and if the hospital is to meet the physical, mental and emotional need of the child. It must also provide suitable play activity to the child to reduce the fear and anxiety of hospitalized children.¹³

METHODOLOGY

The Quantitative: Experimental Research Approach was used in the study and “**Post-test control design**” was used as a study design. This study included the children between the age group of 6-12 years admitted in paediatric ward of Hospital. **Simple Random sampling technique** was used to select the sample size of 60 children. Children were randomly allocated in experimental and control group. Hamilton anxiety scale was selected to assess the anxiety level of children.

Group	Intervention	Post test
Experimental group	Play therapy was given	Assessment of anxiety by using HAMILTON scale.
Control group	Routine care was given	Assessment of anxiety by using HAMILTON scale.

RESULT FINDINGS:

SECTION I:

Description of selective variables of hospitalized children

TABLE 1

Frequency, percentage distribution of hospitalized children in terms of clinical variables in experimental and control group

N=60

S.no	Clinical variables	Experimental group (N-30) f (%)	Control group (N=30) f (%)	Chi square	Df	p value
1	Diagnosis					
1.1	Respiratory	08(26)	09(30)	6.52	3	0.08 ^{NS}
1.2	GI	13(43)	08(26)			
1.3	Renal	02(6)	09(30)			
1.4	Others	07(23)	04(13)			
2	Nature of illness					
2.1	Acute	25(83)	26(86)	0.13	1	0.71 ^{NS}
2.2	Chronic	05(16)	04(13)			
3	Previous history of hospitalization					
3.1	No	15(50)	06(20)	5.13	1	0.01*
3.2	Yes	15(50)	24(80)			
4	Duration of stay in hospital					
4.1	Day of admission (1 st day)	07(23)	01(3)	6.53	3	0.08 ^{NS}
4.2	2 nd day	13(43)	14(46)			
4.3	3 rd day	07(23)	13(43)			
4.4	More than 3 days	03(10)	02(6)			
5	Types of treatment child is getting					
5.1	Invasive	01(3)	01(3)	13.5	2	0.00*
5.2	Non-invasive	11(36)	-			
5.3	Both	18(60)	29(96)			

*Significant(p≤0.05)

^{NS}Not Significant(p>0.05)

Table 1 data reveals that Majority of the hospitalized children were having acute nature of illness in experimental group (83%) and in control group (86%) Majority of

the hospitalized children in experimental and control group were getting both (invasive and non- invasive) type of treatment (60%) and (96%) respectively. The computed chi square value for the demographical characteristics of hospitalized children in the experimental and control group were found to non-significant at 0.05 level. Hence it can be inferred from the findings that hospitalized children in both the groups were homogenous in terms of clinical variables except previous history of hospitalization ($p=0.01$) and type of treatment child is getting ($p=0.00$).

SECTION II

Evaluation of effectiveness of play interventions on anxiety among hospitalized children in experimental and control group.

TABLE 2

Frequency and percentage distribution of level of anxiety score of hospitalized children in post-test in experimental and control group.

N=60

Level of anxiety	Range of score	Experimental group Post-test f (%)	Control group Post-test f (%)
Mild anxiety	(0-17)	25(83)	-
Mild to Moderate anxiety	(18-24)	05(16)	19(63)
Moderate to Severe anxiety	(25-30)	-	11(36)

Maximum score=56

Minimum score=0

Table 2 shows that in frequency and percentage distribution of children in terms of level of anxiety score in experimental and control group. In experimental group majority of the children had mild anxiety (83%). In control group all of the children

had moderate anxiety (63%) and severe anxiety (56%).

TABLE 3

Range, mean, median, standard deviation of anxiety score after play intervention among hospitalized children in experimental and control group.

N=60

Group	Range of score	Mean±SD	Median
Experimental group (n=30)	7-19	14.2± 2.98	14
Comparison group (n=30)	21-28	23.9±1.75	24

Maximum score=56

Minimum score=0

Table 3 shows that anxiety score in an experimental score ranges between 7-19 and in control group 21-28 respectively. The mean anxiety score of children in experimental group was 14.2 was lower than mean anxiety score in control group (23.9). the data further indicates that the median for experimental group was 14 and in control group was 24.

TABLE 4
Mean, Mean Differences, Standard Deviation Differences, Standard error of Mean Differences and ‘t’ value of post-test anxiety score between experimental and control group.

N=60

Group	Mean	Mean_D	SD_D	SE_{MD}	t value	p value
Experimental group (n=30)	14.2			0.54		
Comparison group (n=30)	23.9	9.70	0.63	0.32	15.36	0.00*

Significant(p<0.05), t (58) =1.6

Not significant(p>0.05)

Table 4 shows that mean anxiety score of hospitalized children in experimental group was (14.2) and mean anxiety score in control group was (23.9). the result further shows that the computed ‘t’ value of (15.36) was found to be statistically significant at 0.00 level of significance. Thus, suggesting that the mean difference between anxiety score in experimental and control group was a true difference and not by chance. Hence, research hypothesis H₁ was accepted and null hypotheses H₀₁ was rejected. This indicates that play therapy was effective in reducing anxiety among hospitalized children.

SECTION III

Association of the post -test anxiety score of hospitalized children with their selected variables in experimental and control group.

It shows that ANNOVA and “t” test value for association of experimental mean with selected variables. The findings revealed that in experimental group computed f/t were not found to be associated at 0.05 level of significance.

Hence the research hypothesis H_2 was accepted and null hypothesis H_{02} was rejected.

DISCUSSION:

In the present study nearly half (43%) of the hospitalized children in experimental group and in control group most (30%) were in age group of 9-11 years. Half of the hospitalized children in experimental group were males 50% whereas in control group of less than half of the hospitalized children were males (26%) and half were (50%). The group all of the children had moderate anxiety (63%) and severe anxiety (56%). It shows that mean anxiety score of hospitalized children in experimental group was (14.2) and mean anxiety score in control group was (23.9). The result further shows that the computed ‘t’ value of (15.36) was found to be statistically significant at 0.00 level of significance. The findings of the study is consistent with the findings of **Pooja** who conducted a study to assess the effectiveness of play interventions on anxiety among hospitalized children. Post-test mean score of anxiety in experimental and control group, the obtained ‘t’ and ‘p’ value were 12.23 and 0.001 respectively, hence found to be significant ($p < 0.005$) at 0.05 level. The present study shows that ANNOVA and “t” test value for association of experimental mean with selected variables. The findings revealed that in experimental group computed f/t value with all the variables such as age ($f=2/27$, $p=0.95$), gender ($t=28$, $p=0.27$), religion ($f= 3/26$, $p=0.29$), education of father ($f=3/36$, $p=0.37$), education of mother ($f=3/26$, $p=0.29$) and all others were not found to be associated at 0.05 level of significance. Hence the research hypothesis H_2 was accepted and null hypothesis H_{02} . In conclusion study findings revealed that use of play therapy was effective in reducing anxiety among hospitalized children. It is highly recommended as an effective technique. It should be used in paediatric ward to reduce anxiety.

CONCLUSION

On the basis of the findings of the present study, the following conclusions can be drawn:

- The mean anxiety score of children receiving play therapy during hospitalization was significantly less as compared to the mean anxiety score of control group.
- Therefore, play therapy while hospitalization was effective in reducing anxiety. The study concluded that play therapy was an effective technique in reducing anxiety during hospitalization.

IMPLICATIONS

The findings of the present study have implications for child health nursing practice, nursing administration, nursing education and nursing research.

REFERENCES

1. K. park; "Text book of preventive and social medicine; 19th edition, Banarsidas Bhanot; Jabalpur; 2007;442
2. Gulani KK. Community health nursing principles and practices.1st edition, New Delhi: Kumar Publishing House;2005;10-12.
3. Wright KD, Stewart SH, Finely GA, Buffett-jerrott SE. Prevention and Intervention Strategies to Alleviate Preoperative anxiety in Children. A Critical Review. Behavior modification.2007 Jan 1;31(1):52-79.
4. Lumley MA, Melamed BG, Abeles LA. Predicting children's presurgical anxiety and subsequent behavior changes. Journal of pediatric psychology.1993 August 1;18(4);481-97.
5. Skipper Jr JK, Leonard RC. Children, stress and hospitalization: A field experiment Journal of Health and Social Behavior.1968 December:275-87.
6. Kotiniemi LH, Ryhanen PT, Moilanen IK. Behavioral changes in children following day-case surgery: a 4-week follow-up of 551 children. Anesthesia, 1997 Oct 1;52(10): 970-6.
7. Ingalls, salerom. Maternal and Child health nursing. 9th edition. Network: Mosby;1999.
8. Potasz C, Varela MJ, Carvalho LC, Prado LF, Prado GF. Effect of play activities on hospitalized children's stress: a randomized clinical trial, Scandinavian journal of occupational therapy,2013 Jan 1;20(1):71-9.
9. Favara Seacco C, Smirne G, Di Catalado A, Art therapy as support for children with

leukemia during painful procedures. *Med Pediatr Oncol*, 2001;36(4);474-480.

10. Potast C, De Varela MJV, De Carvalho LC, Do Prado GF. Effect of play activities on hospitalized children's stress: a randomized clinical trial *Scandinavian Journal of Occupational Therapy*,2013;20(1);1-789.

11. Koukouikos K, Tzeha I, Panteliduop, Tsaloglidou A. The importance of play during hospitalization of children. *Materia socio-medica*.2015 Dec;27(6):438.

12. Fernandes SC, Arriaga P. The effects of clown intervention on worries and

13. Reinhard SC, Given B, Petlick NH, Bemis A. Supporting family caregivers in providing care. Centre for American Nurses Board of Directors.2009;27.
14. Leventhal H, Contrada RJ, Levanthal EA. Lessons from white coat hypertension; Comment on Spruill et al. “The impact of perceived hypertension status on anxiety and the white coat effect”. Annals of Behavioral Medicine 2007 Dec1;34(1):10-3.
15. Boucher S, Downing J Shemilt R. The role of play in children’s palliative care. Children 2014 Oct1;1(3);302-17.
16. Clark CD, in sickness and in play; Children coping with chronic illness, Renwick New Jersey, LONDON Rutgers University press, 2003.
17. Kottman, T. and Lanneret (2007). Play therapy: Basics and beyond. American Counselling Association.4,1-19.
18. Ziegler DB, Prior MM, Preparation for surgery and adjustment in hospitalization Nurse Clin North Am.1994Dec; 29(4) 655-69.
19. Jun-Tai, N. CPIS Fact sheet no 6. Play in hospital. Children’s play information service, NCB.2004.
20. Nabors L, Bartz J, Kichler J, Sievers R, Elkins R, Pangallo J. Play as a mechanism for working through medical trauma for children with medical illness and their siblings. Issues in comprehensive paediatric nursing .2013 Sep1; 36(3); 212-24.
21. Parham d. The role of play in Assessment Play from Birth to Twelve; Contexts Perspectives, and Meanings, 2015 Mar; 19; 233.
22. Saucier BI. Play activities a nursing intervention. Advanced clinical care.1989.
23. Sadler C. Child Play, Nursing Times; 1990:86(11), 16-17.
24. Rae WA, Worchel FF, Upchurch J, Sanner JH, Daniel CA. The Psychological impact of play on hospitalized children. Journal of Paediatric Psychology.1989 Dec1;14(4)617-27.

25. William LI, Cheung H, Lopez V, Lee TL. Effects of preoperative therapeutic play on outcomes of school-age children undergoing day surgery. *Research in nursing and health*,2007 Jun;1;30(3)320-32.
26. Bastin T. Children and illness: psychological aspects of hospitalization. *Archives de paediatric: organe official de la Societe francaise de pediatrie*, 2000 Apr,7(4);405-9.
27. Denise F. Polite, Bernadette P. Hunger. *Nursing research- principles and methods*. 2nd edition. Philadelphia: Lippincott publishers;1999.
28. Leblanc M, Ritchie M.A meta-analysis of play therapy outcomes. *Counselling Psychology Quarterly*, 2001 Jun1;14(2); 149-63.
29. Katz k, Fogelman R, Attias J, Barn E, Soundry M. Anxiety reaction in children during removal of their plaster cast with the saw. *Bone and joint journal*.2001 April1;83(3);388-90.
30. Smeltzer S, Bare B, Hinkle J, Cheever K, Williams P, Brunner and Suddarth's textbook of medical surgical nursing. 12th edition, Philadelphia: Lippincott Williams and Wikins Co;2010.
31. Ball J, Bindler RM. *Paediatric nursing: caring for children*. Prentice Hall;2008(4th edition) 2008.
32. Mariner. *A nursing theorist and their work*. 1st edition, Toronto C.V. Company 1986.
33. Pressde D, May L, Eastman E, Grier D. The use of play therapy in the preparation of children undergoing Mr imaging. *Clinical radiology*, 1997 Dec 1;52(12);945-7.
34. Ziegler DB, Prior MM. Preparation for surgery and adjustment to hospitalization: paediatric surgical nursing. *The Nursing Clinic of North America* 1994;29(4);655-69.
35. Gil E, Drews AA, editors. *Cultural issues in play therapy*. Guilford publications;2015 May 14.
36. Francischinelli AG, Almeida FD, Fernandes DM. Routine use of therapeutic play in the care of hospitalized children: Nurses perception. *Acta paullista de Enfermagem*,2012;25(1):18-23.

37. Wolfer JA Visintainer ma. Paediatric surgical; patients and parent's stress and responses and adjustment as a function of psychologic preparation and stress point Nursing Care. Nursing Research 1975 Jul 1;24(4):244-55.
38. Ribeiro PJ, Sabates AI, Ribeiro CA. The use of therapeutic toy, as a tool for nursing interventions, in the preparation of children for blood sampling Rev Esc Enferm USP.2001 Dec; 35 (4):420-2.
39. Shabir. textbook of advanced nursing practice6th ed.2012
40. Shivcharan Singh Gandhar, Suresh Sharma, Jaya Deshmukh. European Journal of Molecular & Clinical Medicine, 2020, Volume 7, Issue 11, Pages 5960-5979
41. Polit DF, Beck CT. Nursing research: Principles and methods. Lippincott Williams and Wilikins ;2004.
42. Jones SM, Fiser DH, Livingston RL. Behavioural changes in paediatric intensive care unit. American journals of disease of children.1992 Mar; 1; 146(3):375-9.
43. Kinjel Patel, Suresh V, Ravinder H.N. A study to assess the effectiveness of play therapy on anxiety among hospitalized children. IOSR Journal of Nursing and Health Sciences.2014 Oct: 17-23.
44. Laura A Talbot. Principles and practice of nursing research. 1st edition Missouri: Mosby publishers:1995.
45. Denise F. Polit, Cheryl tatano Beck. Nursing research principles and methods. 7th edition. Philadelphia: Lippincott publishers: 2003.
46. Basavanthappa BT. Nursing research 1st edition. Bangalore: Jaypee Brothers medical publishers:2003.
47. Stuber M.L, Nader K.D.S.W, Yasuda P, Pynoos R.S, Cohen S. Stress responses after paediatric bone marrow transplantation: preliminary results of a prospective longitudinal study. Journal of American Academy of Child- Adolescent Psychiatry, 1991:30(6):952-957.
48. Mansy ES, Gamalat-Mahmoud W, Rashad A, Ola-Ghadban RS. Fears of school age children during hospitalization and their coping strategies. Journals of Medical Research Institute.2007;28(3);271-80.
49. Gomes GI, Nobrega MM, anxiety in children following hospitalization; a proposal for a nursing diagnosis 2015 Oct;23(5);963-70.

50. Weber FS. The influence of playful activities on children anxiety during the preoperative period at the outpatient surgical centre. *Journal de paediatric*. 2010 Jun; 86(3):209-14.

51. Stuber MI, Nader K, Yasuda P, Pynoss RS, Cohens S. Stress responses after paediatric bone marrow transplantation: Preliminary results of a prospective longitudinal study. *Journals of the American Academy of Child and Adolescents psychiatry* 1991 Nov 1;30(6)952-7.

