

Effectiveness of play therapy in reducing stress among school age children admitted in paediatric wards of BPKIHS



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ABSTRACT

Background: Hospitalization of children, separation from parents and illness itself may contribute to stress. Play Therapy is one of the most important aspects of a child's life and the most effective tools for managing stress. Objective: To assess the effectiveness of play therapy in reducing stress among school age children admitted in Pediatric wards of B.P. Koirala Institute of Health Sciences.

Methods: Pre-experimental (one group pretest posttest design) research design was adopted for this study. A total of 46 children were selected by using total population enumeration sampling technique. Level of stress was assessed using self-developed, semi structured observation checklist and questionnaire pretested research tool.

Results: This study showed that during Pretest, 19.50% of the children had mild stress, 58.6% had moderate stress and 21.7% had severe stress. After play therapy, there was noteworthy reduction in percentage of children with stress; severe stress reduced by 8.7% and moderate by 39.1%. The total mean Score before and after play therapy was significantly different (30.17 ± 3.46 Vs. 26.30 ± 5.04 , $P = <0.001$).

Conclusion: Play Therapy was an effective method in reducing stress level among hospitalized school aged children.

Keywords –

Effectiveness,
Play therapy,
Hospitalization,
Paediatric,
Children,
Stress

I. INTRODUCTION

Hospitalization is a stressful experience for children. Unlike the toddler and preschooler, school-age children usually are much more capable of understanding explanations regarding tests, surgery, and other routines. Despite age and increased mastery, school-age children have fears and concerns regarding illness and hospitalization.

Play is one of the most important aspects of a child's life and one of the most effective tools for managing stress. Play is an important aspect in fostering growth and development. The proper selection and use of toys can reduce the traumatic effects of a hospitalization experiences and aid in the recovery phase of illness¹. Therapeutic play is concept which is increasing focus and provides the child to release from the stress and tension².

The Nurse plays a vital role in keenly observing the child to determine the play needs and tactful handling by the nurse can minimize the stress². For over 60 years, play therapy has been a well-established and popular mode of child treatment in clinical practice³. Meta-analytic reviews of over 100 play therapy outcome studies have found that the over-all treatment effect of play therapy ranges from moderate to high positive effects⁴.

Therefore this study aims to assess the effectiveness of play therapy in reducing stress among school age children admitted in Pediatric wards. A secondary aim of this study was find out the association between the pre-test stress score and the selected demographic and background variables of the hospitalised children.

II. MATERIALS AND METHODS

The was Pre-experimental (one group pretest posttest design) research design conducted in Pediatric wards of B.P. Koirala Institute of Health Sciences between. Informed consent was obtained from the parents of each school age child admitted in the ward.

Total population enumeration sampling technique was adopted in the study. Total forty six children were enrolled in the study. Inclusion criteria were 6-12 years school age children admitted in pediatric wards of B.P. Koirala Institute of Health Sciences who had apparently normal growth and development. Potential participants were excluded who cannot participate in play activities, with neurological deficit, who are <6 years of age and who are not conscious and well oriented.

The study was approved by the Institutional Ethical Review Committee of B.P. Koirala Institute of Health Sciences. The aim and method of study were explained to the children and their parents, and they were informed that if they did not want to continue, they could withdraw from the study without stating a reason. Verbal assent was taken from the children and written consent was taken from the parents.

For patients agreeing to participate, background demographic information were collected. Pre-test stress level was assessed among hospitalized children using self-developed semi-structured observation checklist and interview schedule. After pretest, the play material was given to the children where the child played Ludo with researcher for about 30- 45 minutes.

Immediately after play therapy, posttest stress level was assessed in the all the children who were included in the pre-test by using the same tool for evaluating the effectiveness of play therapy in reducing the stress.

A self-developed, semi-structured observation checklist and interview schedule was used to assess the level of stress among the hospitalized children same tool was used during pretest and post test.

III. STATISTICAL ANALYSIS and GRAPHICAL PRESENTATION

Data were analyzed with SPSS version 11.5; $p < 0.05$ was considered significant. Parametric data such as stress levels of children was compared with the Student's t test. Association between pre-test stress score and selected demographic and background variables were assessed with one way ANOVA test and Independent t-test.

IV. RESULTS

As seen in Table 1, Out of 46 children 41.3% of them belonged to age group 6-8 years where the Mean age was 8.54 ± 2.1 years. Majority of children (67.39%) were male and 73.9% of the children were studying in 1-6 class. Regarding the previous hospitalization, 69.57% did not have history of previous hospitalization. More than half of the children (65.2%) had hospital stay of <3 days. Majority (73.82%) of the children had duration of illness <8 days.

Table 1 : Demographic and background characteristics of the children

Characteristics	Frequency	Percentage (%)
Age		
6-8 years	19	41.3
8-10 years	12	26.1
≥10 years	15	32.6
Sex		
Male	31	67.0
Female	15	33.0
Education level		
Nursery- kg	12	26.1
1-6 class	34	73.9
Number of siblings		
<2	30	65.2
>2	16	34.8
Previous History of Hospitalization		
Yes	14	30.0
No	32	70.0
Duration of Hospital Stay of the Children		
1-3 days	30	65.2
>3 days	16	34.8
Duration of illness		
1-4 days	17	37.0
5-8 days	17	37.0
>8 days	12	26.0
Interest towards Play		
Sometimes	23	50.0
Most of times	18	39.1
Frequently	5	10.9

Table 2 Comparison between Pretest and Posttest Stress Level

Characteristics	Mean (\pm 2SD)	P value
Pretest	30.17 \pm 3.46	
Post test	26.30 \pm 5.04	<0.001

Table 3 Association of Selected Socio-Demographic Variables with Pretest Stress Score

Characteristics	Mean (\pm 2SD)	P value
Age		
6-8 years	31.7 (2.2)	
8-10 years	26.1 (3.0)	
≥ 10 years	31.3 (2.3)	<0.001
Sex		
Male	30.4 (3.7)	
Female	29.6 (2.7)	0.440
Education level		
Nursery- kg	31.9 (2.3)	
1-6 class	29.5 (3.6)	0.010
Number of siblings		
<2	31.1(3.2)	
>2	28.3 (3.3)	0.010
Previous History of Hospitalization		
Yes	29.2 (3.4)	
No	32.2 (2.3)	0.002
Duration of Hospital Stay of the Children		
1-3 days	30.3(3.8)	
>3 days	29.8(2.5)	0.630
Duration of illness		
1-4 days	29.9 (4.7)	
5-8 days	29.8 (2.6)	
>8 days	30.9 (2.1)	0.690

Children's stress levels before and after play therapy was compared with Student's t test. As seen in Table 2, there was significant difference ($p < 0.001$) in the stress level of the children assessed with the observation checklist after the implication of play therapy which is consistent with the study conducted by Daniel, Rae, Saner, Upchurch, & Worschel where statistical results indicated children who received child-centered play therapy displayed a significantly lower level of fear of hospitalization and decreased in behavioral problems than the children in the control group.

Table 3 depicts that the stress during hospitalization was found to be more in ≥ 10 years of age group while less in 8-10 years of age group. Stress level in male children (30.4 ± 3.7) was higher than in female (29.6 ± 2.7) but there was no significant association between the stress level with the sex. This study is similar as the study conducted in Loma Linda University to investigate the influence of health status as gender, acutely and chronically ill on the stress of 82 hospitalized children and between 3 to 8 years.

Likewise the stress level of the children significantly decreased with the increasing educational level. Thus, there was significant association between the stress level with the educational level of the children ($p = 0.01$).

With the increase in the number of siblings, stress level was decreased (31.1 ± 3.2 to 28.3 ± 3.3) thus, there was significant association ($p = 0.01$) between the stress level and the number of siblings of the children. Children with the previous history of hospitalization had less stress compared to hospitalization for the first time. So, there is significant association between the stress level of the children with the previous history of hospitalization ($p = 0.002$) which is consistent with the study conducted in the medical college of Georgia, Augusta to examine the emotional distress in 80 preschool-aged children during pediatric hospitalization.

With the increase in the duration of illness, stress level of the children also increased but there was no significant association between the children's stress level and the duration of illness ($p = 0.69$). This is consistent with the study conducted in Loma Linda University to investigate the influence of health status as gender, acutely and chronically ill on the stress of 82 hospitalized children and between 3 to 8 years.

Thus, stress level of children was significantly associated with age, educational level, number of siblings and previous history of hospitalization.

V. DISCUSSION

The Out of 46 children 41.3% of them were belonged to age group 6-8 years where the Mean age was 8.54 years and SD ± 2.1 years, which is consistent with the finding of the study done by Rae, Worchel, Upchurch at Scott and White Memorial Hospital in Texas where 46 children were taken as the sample of age group 8-12 years¹⁰.

This study was similar with the study conducted by Clatworthy, where 114 children admitted to general pediatric units at two locations were assessed for level of stress. Children in the experimental group participated in play therapy sessions 30 minutes per day. Significant differences were found between the experimental group and the control group that the level of stress did not increase significantly in children who had received play therapy during their hospital stay, but stress level did increase significantly in the control group¹⁰.

Stress level in male children (30.4 ± 3.7) was higher than in female (29.6 ± 2.7) but there is no significant association between the stress level with the sex. This study is similar as the study conducted in Loma Linda University to investigate the influence of health status as gender, acutely and chronically ill on the stress of 82 hospitalized children and between 3 to 8 years. The study shows that the gender did not have a significant influence on stress⁸.

Children with the previous history of hospitalization had less stress compared to hospitalization for the first time. So, there is significant association between the stress level of the children with the previous history of hospitalization ($p = 0.002$) which is consistent with the study conducted in the medical college of Georgia, Augusta to examine the emotional distress in 80 preschool-aged children during pediatric hospitalization. The results shows that emotional stresses were negatively related to age and was concluded that stress is less in children who had a previous history of hospitalization⁹.

Study reveals that during the first three days of hospital stay, children had experienced more stress level which was reduced along with the increased in duration of stay. This study was similar with the study conducted by Clatworthy S. where he studied the anxiety responses of 5- to 11-year-old children during and after hospitalization. Change in anxiety over time was examined, as was the relationship between children's anxiety and age, sex, length of hospitalization, previous admission, and parental anxiety. Children demonstrated a decrease in anxiety from admission to discharge³¹.

This study shows that with the increase in the duration of illness, stress level of the children also increases but there is no significant association between the children's stress level and the duration of illness was conducted in school of nursing, Loma Linda University to investigate the influence of health status as gender, acutely and chronically ill on the stress of 82 hospitalized children and between 3 to 8 years. The study shows that the severe level of stress in chronically ill children is 79%; acutely ill children identified 61.89% of severe. So the study concluded that the chronic illness children have more stress than acute illness children⁸.

Similar study was conducted by Pereira to find out the emotional reactions of hospitalized children, identified that anxiety fear, anger were more prominent emotional reactions among school aged children. A sample of 43 subjects aged 6 –12 years was consecutively selected for the study. Anxiety, detachment, sadness and weeping more often [$P < 0.05$]. Behavior was significantly influenced by severity of illness [$r = 0.39$], [$P < 0.01$], duration of hospitalization [$r = 0.42$], [$P < 0.01$], number of previous hospitalization [$r = 0.44$], [$P < 0.01$]. Separation from their parents has been long recognized as the greatest source of anxiety for children less than 7 years of age⁷.

VI. CONCLUSION

Play therapy was found to be an effective method for stress reduction among hospitalized children. Nurses need to be aware of stress among hospitalized children. Interventions should be implemented to decrease stress in children. Nurses can use play therapy for stress reduction in children. In hospital settings, play room can be made so as to make the children familiar with the hospital environment. Similar study should be done in different settings taking larger samples using control group.

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