

## THE EFFECT OF COLORING PLAY THERAPY ON REDUCING STRESS IMPACT OF HOSPITALIZATION IN PRE-SCHOOL AGE CHILDREN

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### ABSTRACT

**Background :** Hospitalization is a critical condition in children, when the child is sick and is being treated in the hospital. Hospitalization can be considered as a threatening experience and becomes a stressor so that it can cause a crisis for children and families. In an effort to reduce the impact of children from hospitalization experienced by children during child care, we need a medium that can express anxiety, one of which is coloring picture therapy. Data from the Children's Room at Adjidarmo Rangkasbitung hospital found that children who were hospitalized from January to June 2022 had 979 cases of hospitalized children or an average of 163 cases per month.

**Writing purpose :** the effect of giving play therapy coloring pictures on reducing stress due to the impact of hospitalization in pre-school-aged children at Adjidarmo Rangkasbitung Public Hospital, Banten

**Research methods :** This study used a pre-experimental denham design with one group pretest-posttest design. One-group pre-post test design to obtain stress level data before and after the intervention. The number of samples in this study were 32 pre-school children who fit the inclusion criteria. The instrument used for data collection used a questionnaire and then the data were analyzed using the paired t test.

**Research result :** the average stress on children due to hospitalization before the intervention was given was 21.09 pont or included in the moderate category and after the intervention became 13.13 or included in the moderate. There is an effect of giving play therapy coloring pictures to reduce stress due to hospitalization in pre-school-aged children at Adjidarmo Rangkasbitung Hospital, Banten with a p value of 0.000.

**Conclusions and recommendations:** Image coloring play therapy can be effective in reducing stress in children due to hospitalization, therefore health workers can apply image coloring play interventions to children who are hospitalized

**Keywords:** Coloring Play, Stress, Pre-school age children.

### INTRODUCTION

Hospitalization is a critical condition in children, when the child is sick and is being treated in the hospital. This situation can occur, one of which is caused by anxiety in children which causes physiological and psychological changes, if the child is not able to adapt to these changes. The short-term impact of anxiety and fear that is not treated immediately will make the child refuse the care and treatment given, which will affect the length of stay, worsen the child's condition and can even cause death in the child. (Saputro, and Fazrin, 2017).

Efforts to reduce the impact of children from hospitalization experienced by children during treatment, we need a media that can express anxiety, one of which is by playing therapy coloring pictures. (Dayani, Budiarti, and Lestari, 2017). Coloring therapy is one of the most effective ways to reduce stress in children and is important for children's mental and emotional health. Games for children who are hospitalized in the hospital not only give pleasure to children but also help children express feelings, anxious thoughts, fear, sadness, tension and pain. (Deswita, 2017).

Coloring therapy is a game that is in accordance with hospital principles where psychologically this game can help children express feelings of anxiety, fear, sadness, depression and emotions (Arifin and Udiyani, 2019).

Tanesi's research (2018) in his study using the Wilcoxon signed rank test analysis obtained a significant p value of  $0.000 < \alpha = 0.05$ , it can be concluded that  $H_0$  is rejected and  $H_1$  is accepted, which means there is a significant effect between image coloring therapy and a decrease in anxiety levels. This shows that coloring pictures therapy is one way to reduce anxiety.

Aryani (2021) the results of the t test obtained a value of  $p = 0.000$  if  $\alpha = 0.05$  then  $p < \alpha$  and  $H_a$  is accepted. The results of this study indicate that there is an effect of play therapy activity coloring pictures on reducing anxiety due to hospitalization in preschool-aged children at the Gatot Soebroto Army Hospital Pavilion in 2019. This research is expected to increase play therapy activities as one of the interventions to help reduce anxiety, especially preschool-aged children who are experiencing hospitalization.

Based on data obtained from Room Child Adjidarmo Rangkasbitung Lebak Banten found that in 2020 there were 1,842 children hospitalized, with various cases such as ARI, diarrhea, dengue fever, typhoid fever and others. This has increased in 2021 to 1,963 cases with cases of ARI, diarrhea, DHF, measles, asthma. Then in the period January - June 2022 cases of children with hospitalization reached 979 cases or an average of 163 cases per month (Results of preliminary study, 2022).

The results of a preliminary study conducted on 10 mothers who had pre-school aged children who were hospitalized in Room Child Adjidarmo Rangkasbitung Lebak Banten, all of them were children who had just been admitted to the hospital for the first time. The conditions at the time of the interview with the children had improved with full awareness, the mothers said that in the next few days their children would start to be able to go home, but as many as 7 mothers said their children were fussy and unable to sleep, the children looked restless and tense. The mother also said that her child always wanted to be held in his arms while sleeping. Children often urinate, and wash their hands many times, and often have bad dreams (Results of preliminary studies, 2022).

Based on this description, the authors are interested in conducting research on the effect of giving play therapy coloring pictures on reducing stress due to hospitalization in pre-school-aged children at Adjidarmo Rangkasbitung Public Hospital, Banten.

## RESEARCH METHODS

The research method used was a quasi-experimental with a Pretest-Posttest control group research design. Using this method it can be seen that the effect of playing therapy coloring pictures has a significant effect on reducing stress due to hospitalization in pre-school-aged children. This research was conducted in December 2022, namely at the hospital of Adjidarmo Rangkasbitung Lebak Banten. The population in this study were children who were hospitalized in the Children's Room of Adjidarmo Rangkasbitung Lebak Banten in the July period with an estimated 163 people. A sample of 32 people was obtained using the consecutive sampling technique and met the research criteria,

Retrieval of data through a questionnaire format that was given directly to the respondents. Measurement of anxiety variable using a questionnaire given directly to the respondent. The questionnaire refers to the HRS-A component which consists of 16 questions that have been made by researchers based on needs. Each question is given a score rating between 0-3, so that the value obtained from the instrument is in the range 0-48. After that the researcher gave play therapy to color the pictures with the tools that had been provided by the researcher. The game was carried out for 30 minutes while accompanied by researchers and parents and the last step was giving a second questionnaire (post test) which was carried out 24 hours after the intervention. Furthermore, the data was processed and analyzed using a paired test.

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**RESEARCH RESULT**

**1. Characteristics of Respondents**

**Table 1**  
**Characteristics of children hospitalized at hospital Adjidarmo Rangkasbitung Banten**

<b>Characteristics</b>	<b>N</b>	<b>%</b>
<b>Gender</b>		
Man	18	56,3
Woman	14	43,7
<b>Age</b>		
4 years	6	18.8
5 years	9	28.1
6 years	17	53.1
<b>The type of disease</b>		
Diarrhea	14	43.8
ISPA	12	37.5
Typhoid Fever	4	12.5
DHF	2	6.3
<b>Length of Treatment</b>		
4 days	6	18.8
5 days	9	28.1
6 days	17	53.1
7 days	7	21.9

The data in table 1 shows that most of the respondents were male, 18 people (56.3%), and the ages of the respondents were mostly 6 years old, namely 17 people (53.1%). The most common disease experienced by respondents was diarrhea, namely 14 people (43.8%), then the length of stay of the respondents, most of them had been treated for 6 days as many as 17 people (53.1%).

**2. The level of stress in children due to hospitalization before intervention is given**

**Table 2**  
**Descriptive statistics on stress levels in children due to hospitalization before being given a therapeutic intervention by coloring pictures**

<b>Stress Level</b>	<b>Min-Max</b>	<b>Means</b>	<b>SD</b>
Pre Test	14-28	21.09	3,514

Data in table 2 shows that the stress score in pre-school aged children before being given intervention in the form of play therapy coloring pictures was the lowest at 14 points and the highest was 28 points, an average of 21.09 points or included in the moderate category. If categorized, the stress level can be seen in the following table:

**Table 3**  
**Frequency distribution of stress levels in children as a result of hospitalization before being given a play therapy intervention coloring pictures at Hospital of Adjidarmo Rangkasbitung, Banten**

Stress level	Frequency (f)	Percentage (%)
Currently	26	81.3
Heavy	6	18.8
<b>Amount</b>	<b>32</b>	<b>100</b>

Data in table 3 shows that most of the respondents before being given the intervention experienced moderate levels of stress as many as 26 people (81.3%) and who experienced severe stress as many as 6 people (18.8%).

3. The level of stress in children due to hospitalization after being given an intervention

**Table 5.4**  
**Descriptive statistics on stress levels in children as a result of hospitalization after being given a coloring game therapy intervention at Hospital of Adjidarmo Rangkasbitung, Banten**

Stress Level	Min-Max	Means	SD
Posttest	4-18	13,13	3,424

Data in table 4 shows that the stress score in pre-school aged children after being given an intervention for 1 day, the lowest is 4 points and the highest is 18 points, the average stress score decreases to 13.13 or is moderate. If categorized, the stress level can be seen in the following table:

**Table 5**  
**Frequency distribution of stress levels in children as a result of hospitalization after being given a play therapy intervention coloring pictures at Hospital of Adjidarmo Rangkasbitung, Banten**

Worry	Frequency (f)	Percentage (%)
Light	11	34.4
Currently	21	65.6
<b>Amount</b>	<b>32</b>	<b>100</b>

Data in table 5 shows that most of the respondents after being given the intervention experienced moderate levels of stress as many as 21 people (65.6%) and those who experienced mild stress as many as 11 people (34.4%).

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**4. The effect of giving play therapy coloring pictures on reducing stress due to hospitalization in children.**

**Table 6**  
**The effect of giving play therapy coloring pictures on reducing stress due to hospitalization in pre-school-aged children**

		Mea ns	Difference	T count	P-value
Pair 1	Pre_test	21.0 9	7,969	14,614	.000
	Post_Test	13.1 3			

Data in table 6 shows that the average stress score on respondents before being given an intervention was 21.09 points (moderate stress), then after being given an intervention of 13.13 (moderate stress), so there was a decrease in the stress score of 7.96 points. The results of the statistical test using the paired test obtained a value of 0.000, meaning that there was an effect of giving play therapy coloring pictures on reducing stress due to hospitalization in pre-school age children at Hospital of Adjidarmo Rangkasbitung, Banten.

**DISCUSSION**

**1. The stress level in children is the impact of hospitalization before being given a coloring picture play therapy intervention**

The results of the study showed that the average stress score in pre-school age children before being given intervention in the form of play therapy coloring pictures was 21.09 points or included in the moderate category. Then if it is categorized as a whole, the respondents who experience moderate levels of stress are as many as 26 people (81.3%) and those who experience severe stress are as many as 6 people (18.8%).

The results of this study are in accordance with the findings put forward by Rudolph (2002) in Sukowati (2012) who said that, in the early stages of entering a pediatric hospital environment, children still need to adapt to their illness and to a new and unfamiliar environment to carry out routine activities with staff. the hospital and the people around it. Children also experience pain due to illness or treatment measures during the treatment they are undergoing. This is what causes children to have maladaptive behavior which tends to be high in children who are admitted to the hospital for the first time.

**2. The level of stress in children due to hospitalization after being given a therapeutic intervention by coloring pictures**

Based on the results of the study, it was found that the average stress score in pre-school aged children after being given an intervention for 1 day, the average stress score decreased to 13.13 or was included in the moderate. If all of them are categorized as experiencing moderate levels of stress as many as 21 people (65.6%) and those who experience mild stress are as many as 11 people (34.4%).

Giving coloring therapy allows children to get rid of the stress that exists due to hospitalization with activities through coloring pictures. This is in accordance with the mechanism of sublimation, namely by way of a source of tension with other acceptable activities. The source of tension has been diverted to activities that cause feelings of pleasure (Dayani, Budiarti, and Lestari, 2017)

Agustin's research in Tanesi (2016) says that coloring can help the process of caring for children without causing fear or trauma to children, and is appropriate for the stage of child development and does not require excessive physical activity.

### **3. The effect of giving play therapy coloring pictures on reducing stress due to hospitalization in pre-school-aged children**

The results showed that the average stress score of the respondents before the intervention was given was 21.09 points (moderate stress), then after the intervention was given it was 13.13 (moderate stress), so that there was a decrease in the stress score of 7.96 points. This indicates that the therapeutic intervention of coloring pictures is effective in reducing stress in children. This is clarified by the results of statistical tests using paired tests obtained a p value of 0.000, meaning that there is an effect of giving play therapy coloring pictures on reducing stress due to hospitalization in pre-school age children at Adjidarmo Rangkasbitung General Hospital, Banten.

The results of this research are in line with those conducted by Idris (2018) who found from hypothesis testing is obtained by using the Paired T-test with a p value = 0.009  $< \alpha = 0.05$  (5%) with a count of 3.006 which means rejecting  $H_0$  and accepting  $H_1$ . Play therapy (coloring) is effective in reducing anxiety due to hospitalization in pre-school aged children (3-6 years) in the jasmine room of RSUD dr. Chasbullah Abdulmadjid, Bekasi City.

Likewise with Tanesi (2018) in his study using the Wilcoxon signed rank test analysis, a significant p value was obtained of 0.000  $< \alpha = 0.05$ , it can be concluded that  $H_0$  is rejected and  $H_1$  is accepted, which means that there is a significant effect between image coloring therapy and a decrease in anxiety levels. This shows that coloring pictures therapy is one way to reduce anxiety.

The same thing was found in Aryani's research (2021). The results of the t test obtained a value of  $p = 0.000$  if  $\alpha = 0.05$  then  $p < \alpha$  and  $H_a$  is accepted. The results of this study indicate that there is an effect of play therapy activity coloring pictures on reducing anxiety due to hospitalization in preschool-aged children at the Gatot Soebroto Army Hospital Pavilion in 2019. This research is expected to increase play therapy activities as one of the interventions to help reduce anxiety, especially preschool-aged children who are experiencing hospitalization.

### **CONCLUSION**

Based on the results of the research and discussion regarding the effect of giving play therapy coloring pictures on reducing stress due to hospitalization in pre-school-aged children, it can be concluded as ; The stress level in children due to hospitalization before being given a play therapy intervention coloring pictures has an average score of 21.09 pont or in the moderate category; The stress level in children due to hospitalization after being given a play therapy intervention is coloring pictures with an average stress score decreasing to 13.13 or being moderate; and There is an effect of giving play therapy coloring pictures to reduce stress due to hospitalization in pre-school-aged children at Adjidarmo Rangkasbitung Hospital, Banten with a p value of 0.000.

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