

The Effect Of Solving Puzzles and Listening to Music to Reduce Anxiety in Preschool Aged Children in Edelweis Room RSUD Dr. M. Yunus Bengkulu

Agung Robby Ichwanda
Jurusan Keperawatan Politeknik Kesehatan
Kementerian Kesehatan Bengkulu
Bengkulu, Indonesia
agungrobby3@gmail.com

Hermansyah
Jurusan Keperawatan Politeknik Kesehatan
Kementerian Kesehatan Bengkulu
Bengkulu, Indonesia
man2aditya@yahoo.com

Nehru Nugroho
Jurusan Gizi Politeknik Kesehatan
Kementerian Kesehatan Bengkulu
Bengkulu, Indonesia
84nehru.nugroho@gmail.com

Abstract — Hospitalization is one of the stressors for children that causes discomfort and anxiety because of nursing actions that impact varies depending on the development of age, an experience of pain, support system, and coping skills in dealing with stress. Various activities can be used as alternatives to reduce children's anxiety such as Solving Puzzles and listening to music. This study aims to determine the therapeutic effect of Solving Puzzles and listening to music on the level of anxiety in children.

The design used is quasi-experiment with one group pretest-posttest with the control group. The subject group was observed before the intervention, then observed again after the intervention. Samples were taken using Accidental Sampling with 34 people in one group and the entire study sample was 68 people. The research instrument was a Hamilton Anxiety Rating Scale (HARS) questionnaire.

The analysis used a T-paired test to compare the anxiety variables in the group, while the independent T-test to compare the anxiety variables in the two groups. The results showed that there was a significant decrease in anxiety levels after being given therapy to play Puzzless and listen to music ($p = 0.0001$). So it can be concluded that there is an effect of play therapy on anxiety in children before and after after therapy Solving Puzzles and listening to music. When undergoing hospitalization a therapeutic play activity allows the child to express feelings including anxiety, fear and a feeling of losing control.

Keywords — *Solving Puzzles, Listening to Music, Anxiety,*

I. INTRODUCTION

Hospitalization is one of the stressors for children that causes discomfort or anxiety, the child will experience anxiety because of the actions of nursing and the disease [1]. In preschool children this anxiety arises due to restrictions on activities that consider that treatment actions and procedures can threaten their body integrity [2].

Based on the data *Centers for Disease Control and Prevalence (CDC)* (2017) states that children who experience anxiety at age 3 -17 by 3%, depression 2.1% and autism spectrum 1.1% [3]. Data published by *Child Mind Institute (CHI)* 80% of children experience anxiety disorders [4]. Based on the 2015 National Health Survey (Susenas) children who have been hospitalized according to the age group 0-4 years are 5.11%, ages 5-9 years 2, 08%, 10-14 years 1.71%, ages 15-19 years 10-49% [5].

The impact of hospitalization on children varies depending on the development of age, the experience of being sick and being treated in a hospital, support system, and coping skills in dealing with stress. Children will experience disorders, such as somatic, emotional and psychomotor disorders. Children who experience anxiety cannot sleep, and thus can cause irritability, experience anxiety often feel uneasy, nervous, motor activities become meaningless and purposeful, for example, toes tapping, and very surprised at the sound that occurs suddenly so that it inhibits the healing process in children [6].

Reactions to illness or self-problems experienced by children such as separation, not knowing a strange environment or environment, loss of affection, body image will react like regression, namely loss of control, aggression, withdrawal, protest behavior, and more sensitive and passive reject food and others [7].

Purwandi said that to overcome the worsening level of anxiety in children, nurses in providing interventions must pay attention to the needs of children according to their growth and development. The need for preschoolers to assist parents during care, the need for security, and various activities. Various activities that can be used as alternatives to reduce child anxiety such as program meet me at Mount Sinai (MMMS) play program, psychological preoperative preparation intervention (PPPI), sedative medication, parent attendance during anesthetic procedures, music therapy, acupuncture, a self engaging art, and the use of dolls. [8]

Based on Supartini, play therapy is a therapy for children undergoing hospitalization. When treated in a hospital, children will experience a variety of unpleasant feelings, such as anger, fear, anxiety, sadness, and pain by playing children's games will be independent of the tension and stress they experience because by playing the game will be able to divert the pain in the game and relaxation through the fun of playing games [9].

There are several types of games for preschoolers, namely game functions (jumping, going up and down stairs), fiction games (making chairs like horses, war games, cooking, robots, doctors), receptive games or appreciative (listening to stories or fables, seeing pictures, reading story books), forming games (making cakes from clay, making ships, puzzles), achievement games (soccer, volleyball, basketball). These kinds of games

can be done by preschoolers, but it should be noted if the child is sick.

Other therapies that can be done to reduce the level anxiety in children is to provide music therapy. Music therapy is a process that connects aspects healing music itself with physical or bodily conditions and situations, emotional, mental, spiritual, cognitive and one's social needs [10].

Music provides a sense of comfort so that one can relax more and more calm in facing something. After music therapy done, there seems to be an influence on the level of anxiety of patients presurgery because music therapy can reduce the discomfort of anxiety and give positive energy directly to the brain so that there is an impact good that affects the respondent's anxiety level, other than that family support for patients in the face of surgery is very influential because the family can motivate and provide support psychologically to patients [11].

Music therapy generally aims to make the heart and the feeling of someone being happy and entertained. Listening to music expected to stimulate and attract patients to follow the path the rhythm which then creates a relaxed and joyful atmosphere that is at finally there is a positive change [12].

Listening to music is expected to stimulate and attract sufferers to follow the rhythm flow which then creates a relaxed and happy atmosphere that in the end there is a positive change. According to the results of preliminary studies conducted by researchers on October 10, 2017, in the Edelweiss Room of Dr. M. Yunus Bengkulu, the number of pediatric patients from January to October 2017 was 1390 people.

When observations in the room the number of children treated was 15 people, 11 of them showed anxiety reactions. Based on the background above makes researchers interested in conducting research on the Effect of Solving Therapy *Puzzles* and Music Listening on Anxiety Levels in Children Prasekolah in Edelweiss Room Dr. M. Yunus Bengkulu.

II. METHODS

Type of research used was *quasi-experiment* using the design of *one group pretest-posttest with a control group*. This research was conducted in the Edelweiss room of Dr. M. Yunus Bengkulu from January to March 2018. The population is preschool children who are treated in the Edelweiss room of Dr. M. Yunus Bengkulu. Samples were taken using *Accidental Sampling*.

The instrument is a *Hamilton Anxiety Rating Scale (HARS)* questionnaire that contains questions with zero to four intervals with 14 items of anxiety symptoms that describe the anxiety experienced by children. To test the value before and after Solving *Puzzles* and listening to music in each group using the *T-paired test*, while to compare the anxiety variables in the two intervention groups and the control used *T-test independent*.

III. RESULT

TABLE I. CHARASTERISTICS OF RESPONDENTS BASED ON AGE, GANDER, EXPERIENCE OF CARE AND LENGHT OF CARE IN THE EDELWEISS ROOM OFDR.M YUNUS BENGKULU

Characteristics	Intervention (n=34)	Control (n=34)	P Value
Age			
Mean	4,00	3,79	0,331
Median	4,00	4,00	
SD	0,888	0,845	
Min-Maks	3-5	3-5	
CI for Mean 95%	3,69-4,31	3,50-4,09	
Gender			
Boys	18 (52,9%)	25(73,5%)	0,131
Girls	16 (47,1%)	9 (26,5%)	
Experience Healthy			
Ever	15 (44,1%)	18(52,9%)	0,474
Never	19 (55,9%)	13(47,1%)	
Lenght of stay			
Mean	2,38	2,74	0,081
Median	2,00	3,00	
SD	0,888	0,751	
Min-Maks	1-4	2-4	
CI for Mean 95%	2,07-2,69	2,47-3,00	

Based on table 1 the average age of the respondents in the intervention group was 4.00 with the lowest age is 3 years and the highest age is 5 years. While the average age in the control group is 3.79 years with the lowest age is 3 years and the highest is 5 years. Characteristics of respondents based on sex in the intervention group were the same as the control group, dominated by boys as many as 18 people (52.9%) girls 16 people (47.1%) while in the control group 25 people (73.5%) girls 9 people (26.5%).

The category of experience treated beforehand for the intervention group was more than a part of those who had never been treated, namely (44.1%) of 34 respondents, whereas for the control group more than some who had experienced a history of treatment, namely (52.9%) of 34 respondents.

The length of stay in children based on the above table in the intervention group was 2.38 days with the lowest length of stay was 1 day and the maximum length of stay was 4 days. While the average length of stay in the control group was 2.74 days with the lowest length of stay is 2 days and the highest is 4 days. Homogeneity Test Results indicate age, sex, length of experience treated and similar between the control and intervention with p-value<0,05.

TABLE II.AVERAGE DIFFERENCES IN THE ANXIETY VALUE OF CHILDREN IN INTERVENTION GROUPS AND CONTROL GROUPS BEFORE AND AFTER THERAPY FOR SOLVING PUZZLES AND LISTENING TO MUSIC IN THE EDELWEISS ROOM DR. M YUNUS BENGKULU

Anxiety	Intervention Group			Control Group		
	(n=34)			(n=34)		
	Mean	SD	p-value	Mean	SD	p-value
Before	34,7059	5,2427		36,6176	4,2783	
			0,000			0,000

After	21,5000	5,4899	28,7353	3,3961
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Based on table 2, the results of the analysis for the intervention group before Solving *Puzzles* and listening to music was 34,7059, after being given therapy to play *Puzzles* and listen to music 21,5000. There is a difference in the difference of -13,2059. Statistical test results showed $p = 0,000 < 0,05$ so it can be concluded that there was an average difference in anxiety in children before and after being given therapy to play *Puzzles* and listen to music. While the average anxiety in the control group before being given therapy *medical play* 36,6176 and after being given therapy *medical play* 28,7353 with a difference of -7,8824 differences. Statistical test results show $p\text{-value} = 0,000 < 0,05$ so it can be concluded that there is an average difference in anxiety in children before and after being given play therapy *medical play*.

TABLE III . DIFFERENCES IN THE AVERAGE VALUE OF ANXIETY CHILDREN IN THE INTERVENTION GROUP AND THE CONTROL GROUP AFTER DOING THERAPY SOLVING PUZZLES AND LISTENING TO MUSIC EDELWEISS

Group (n=68)	Anxiety			
	Mean	SD	95 % CI	P value
Intervention	21,5000	5,489	19,58-23,41	0,000
Control	28,7353	3,396	27,55-29,92	0,000

In table 5.5 the results of the analysis of the value of $p = 0.000 < 0.05$, H_0 was rejected so it can be concluded that there is a therapeutic effect of Solving *Puzzles* and listening to music on preschoolers' anxiety.

IV. DISCUSSION

The results of this study indicate that respondents were mostly 4 years old in the intervention group and 3.79 years in the control group. In line with the research of Novera et al (2017) that the age of children who were hospitalized with age 3 years (48%) and age 4 years (17.3%). The results of the analysis in this study most of the respondents were male, with the percentage in the intervention group 18 (52.9%) and in the control group 25 (73.5%).

This study was supported by the study of Hale [13]. that children who hospitalized more than half of the male sex (67%). The results of this study also showed that the experience had been treated before in the intervention group 15 (44.1%) and in the control group 21 (18.52%). The experience of children who have never been hospitalized makes children unable to express themselves with their environment so that children will tend to experience anxiety.

The results of the analysis in this study found that the average length of stay in the intervention group for 2 days and the most control group was treated 3 days. Based on the results of measurements of anxiety obtained results that children who were treated on the first or second day tend to have higher

anxiety scores than children who had been treated for three days.

The results of the analysis of the average anxiety value of the respondents in the intervention group before the therapeutic action is playing *puzzle* and listening to music is 34.70, and given therapy to play *puzzles* and listen to music is 21.50 with a difference of -13.20.

The average value of anxiety in the control group before being given therapy to play *medical play* was 36.61, after being given medical play therapy was 28.73, with a difference of -7.882. obtained $p\text{-value} < 0.05$. From the results of this analysis, it can be concluded that there are significant differences in anxiety in the intervention group (*puzzle* and listening to music) and the control group (*medical play*) between before and after given play therapy.

From the results of research that has been done to find out the difference in the average knowledge about anxiety between the intervention group (*puzzle* and listening to music) and the control group (*medical play*) after being given play therapy in the Edelweiss Room of Dr. M. Yunus Bengkulu, and obtained a $p\text{-value} < 0.05$, meaning that there were significant differences between the intervention group (*puzzle* and listening to music) and the control group (*medical play*) after being given play therapy in the *Edelweiss Room* of Dr. M. Yunus Bengkulu.

V. CONCLUSION

Distribution of respondents based on the average age of 4 years, the average sex of children treated male, while the experience of long-term care more than part has never been treated (61.8%) and length of stay in children an average of 3 days $p\text{ value} > 0.05$ Average level of anxiety in children before being given therapy to play *Puzzles* and listening to music 32.61 and 37.76 in the control group ($p = 0,000$).

The average level of anxiety in children after being given therapy Solving *Puzzles* and listening to music 19.76 and 28.50 with the control group ($p = 0,000$). There is an effect of Solving therapy on anxiety in children before and after and after therapy is Solving *Puzzles* and listening to music in the intervention group.

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