Original Research

The Effect of Storytelling Using Finger Puppets on Anxiety in Hospitalized Preschool Children

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Article Info	Abstract
<p>Article history:</p> <p>Received: 27 September 2021</p> <p>Accepted: 27 November 2021</p> <hr/> <p>Keywords: anxiety, children, finger puppets, hospitalization, storytelling</p>	<p><i>Introduction:</i> The prevalence rates of disease at preschool age are higher than toddlers and school age. The coping mechanism has not developed at that age, thus contributing to increased anxiety levels during hospitalization. Interventions are needed to overcome anxiety problems so that children are more comfortable and cooperative in undergoing treatment in the hospital more effectively. The research aims to examine the effect of storytelling using finger puppets on anxiety in hospitalized preschool children.</p> <p><i>Methods:</i> Quasi-experiment research with pre and post-test design, 40 preschool children were selected with purposive sampling with inclusion and exclusion criteria, 20 respondents of treatment groups, and 20 respondents of control groups. The instrument used FAS. Data analysis used is the Mann Whitney and Wilcoxon Sign Rank Tests.</p> <p><i>Results:</i> Mann-Whitney results showed the difference in anxiety between treatment and control group in post-test ($p=0.023$), and Wilcoxon results showed Z count -3.827 $a < Z$ table -1.96 value asymp sig. (2-tailed) where z arithmetic $\leq z$ table which means there is influence or probability value $p=0.000$ ($p < \alpha = 0,05$) which means H_1 accepted.</p> <p><i>Conclusion:</i> It is expected that in the future, it can be used as an alternative method to reduce anxiety. And then it's hoped that researchers can further examine more deeply the effectiveness of parental involvement in storytelling play therapy.</p>

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INTRODUCTION

Prevalence of child disease in Indonesia, according to the age group of 0-2 years by 15.14%, ages 3-5 years by 25.8%, ages 6-12 years as much as 13.91% when compared to the overall population, the prevalence of preschool-age disease is higher at 25.8% [1]. This condition allows the child to be treated in a hospital (Hospitalization). Hospitalization causes traumatic events and stress in an uncertain environment for the child and family, whether it is an effective procedure that has been planned in advance or of an emergency that occurs due to trauma [2]. According to researchers [3], the incidence of anxiety in 30 preschool-aged children admitted to Buton hospital 70% experienced moderate anxiety, and 23.3% experienced severe anxiety and 6.6% experienced mild anxiety. Stressors that occur in children associated with hospitalization can cause various impacts. Short-term impacts, such as regression, namely loss of control, displacement, aggression (denial), withdrawing, protest behavior, and more among them experiencing fear when health workers will do the treatment [4].

The long-term impact of anxiety on children has a significant influence on their life function if not addressed early, which will be comorbid with other mental disorders and developmental disorders in children [5]. There needs to be quick action so that children become more comfortable and cooperative to medical treatment measures, one of which is an intervention with play therapy [6].

Play therapy is a fun activity for children and is the most effective activity in reducing anxiety, fear, and coping in the face of stress [7]. Play therapy can help lower anxiety and negative emotions in hospitalized children [8]. Research [9] suggests play therapy with storytelling can decrease anxiety and behavioral disorders in children with surgical preparations. It is also supported by research conducted [10], fairy tale therapy can provide happiness and smiles to hospitalized children, to reduce anxiety. Based on the background, we chose play therapy with storytelling modified using finger puppets as an intervention to reduce anxiety in preschool-aged children treated at Jombang Hospital. The research aims to examine the effect of storytelling using finger puppets on anxiety in hospitalized preschool children.

METHODS

This study is a quasi-experiment with the design of "one group pre and post-test with control group design" where there is an intervention group that gets storytelling modification therapy and the control group is given a storybook and treated as usual. This study was conducted at Jombang Hospital, the population of all children in the Srikandi Room Jombang Hospital. Forty children were selected with purposive sampling with inclusion and exclusion criteria, 20 children to the treatment group and 20 respondents to the control group. The inclusion criteria of this study is preschool-aged children (3-6 years), hospitalized children in the Srikandi Room of Jombang Hospital, children who want to be invited to communicate, and for the exclusion

criteria of this study is children with multi-complications with decreased awareness, children with hearing loss.

The implementation of the study begins by determining the appropriate sample of the needs of the researcher according to the inclusion criteria. Divided respondents into treatment groups and control groups. The intervention group and control group took anxiety measurements first. The control group was treated according to treatment in the Srikandi Room Jombang Hospital without storytelling intervention. The treatment group performed one storytelling intervention modified using finger puppet once for 10 minutes, and then post-test was done 30 minutes after the intervention. Anxiety measurement using the FAS (Face Anxiety Scale) measuring tool developed by McMurtry (2010) in [11]. The rating scale has the lowest score 0 showed no anxiety, score 1 showed mild anxiety, score 2 showed moderate anxiety, score 3 showed severe anxiety and the highest score 4 showed panic.

The inferential analysis used in the study was ordinal (categorical) data using the Wilcoxon Signed Ranks test to look at differences before and after the intervention and the Mann-Whitney test to look at differences in post-intervention values in the control and treatment groups.

The research conducted from May to July 2021. The ethical test was conducted at the Ethics Commission of Health Research of Jombang Regional General Hospital with No.24 /KEPK/IV/2021.

RESULTS

A total of 40 respondents were divided into 20 respondents of the treatment group and 20 respondents of the control group who were actively involved in the study. Gender in both male and female respondents was 11 vs. 9 (55% vs. 45%) in the treatment group and 10 vs. 10 (50% vs. 50%) in the control group. Half of the 5-year-old respondents were 16 (40%) in both groups, in the treatment and control group of 8 (40%) each.

Table 2 showed levels of anxiety at pre-test in the treatment group: 10 (50%) severe anxiety, 8 (40%) moderate anxiety, and 2 (10%) mild anxiety. Furthermore, at the time of post-test results were obtained results 11 (55%) experienced mild anxiety, 5 (25%) moderate anxiety, 2 (10%) severe anxiety, and 2 (10%) not anxious. In the control group at the time of pre-test in the control group, 12 (60%) had moderate anxiety, 4 (20%) mild anxiety, and 4 (20%) severe anxiety. Furthermore, at the time of post-test results were obtained results 13 (65%) experienced moderate anxiety, 5 (25%) mild anxiety, 2 (10%) severe anxiety.

Table 3 showed results from the Mann Whitney test showed anxiety before intervention in the treatment group, and the control group obtained a p-value = 0.053, meaning no difference ($p > 0.05$). While the level of anxiety after the intervention of the treatment group and the control group obtained a value of p-value = 0.023, which means there is a difference ($p < 0.05$). The results of the Wilcoxon Signed Ranks test in the treatment group obtained a value of p-value = 0.000, meaning there is a difference in

anxiety values before and after. While in the control group obtained a value p-value = 0.083 means there is no difference in anxiety values before and after in the control group.

The difference rate criteria in the Wilcoxon test $p < 0.05$, so it can be concluded that storytelling modified finger puppet use decreased anxiety in hospitalized children.

Table 1

Distribution of frequency of characteristics of children based on gender, and age in Srikandi Room Jombang Hospital in 2021

Characteristic		Treatment (n=20)		Control (n=20)		Total (N=40)	
		n	%	n	%	n	%
Gender	Male	11	55.0	10	50.0	21	52.5
	Female	9	45.0	10	50.0	19	47.5
Age (years)	4	8	40.0	6	30.0	14	35.0
	5	8	40.0	8	40.0	16	40.0
	6	4	20.0	6	30.0	10	25.0

Table 2

Distribution of anxiety values in children before and after intervention in Srikandi Room Jombang Hospital in 2021

Variable	Criteria	Pre-Test				Post-Test			
		Treatment		Control		Treatment		Control	
		n	%	n	%	n	%	n	%
Anxiety	No Anxiety	0	0	0	0	2	10	0	0
	Mild	2	10	4	20	11	55	5	25
	Moderate	8	40	12	60	5	25	13	65
	Severe	10	50	4	20	2	10	2	10
	Panic	0	0	0	0	0	0	0	0
Total		20	100	20	100	20	100	20	100

Table 3

Results of Mann Whitney and Wilcoxon Signed Ranks Test in children before and after intervention in Srikandi Room Jombang Hospital in 2021

Variable		Treatment		Control		Mann Whitney
		Mean	SD	Mean	SD	
Anxiety	Pre-test	3.40	0.681	3.00	0.649	p=0.053
	Post-test	2.35	0.813	2.85	0.587	p=0.023
Wilcoxon		p=0.000		p=0.083		

DISCUSSION

Anxiety is the assessment of emotion and a response to something dangerous, closely related to a state of helplessness and sureness [7]. Anxiety levels in pre-schoolers with hospitalization were measured using FAS (Faces Anxiety Scale) on average, experiencing moderate anxiety (50%) and severe anxiety (30%). This fact was found in other research [12] that 70%, 20%, and 5% of preschool-age children experience moderate-severe and mild anxiety at the time of hospitalization. One factor that influences anxiety reactions is the child's developmental age [13]. Anxiety coping strategies have not fully evolved in children in preschool-age. Furthermore, they have been unable to acclimate to the hospital setting.

Many new experiences for children necessitate adaptation, such as meeting strangers, living and sleeping in a new location, and there is no freedom to play. Children of preschool age who are exposed to this find it difficult to communicate their concerns to their families, resulting in a high level of anxiety [14]. Various anxious reactions are shown by children during hospitalization, including regressive behavior, aggression, lack of cooperation, protest behavior, and difficulty to cooperate in carrying out treatment procedures [4]. Another impact of anxiety in children has a significant influence on the function of life if not fingered early, namely will be comorbid with other mental disorders and developmental disorders in children [5].

There needs to be immediate intervention in overcoming anxiety in

children. Otherwise, it will cause fear and apathy, so that the child refuses to perform treatment procedures, treatments to extend the hospitalization period. All this will worsen the child's health condition and cause severity [12].

Play is a fun activity for children, overcoming various kinds of unpleasant feelings in child. By playing, children can feel happy and satisfied [7]. In-play therapy activities researchers also involve the role of parents because the involvement of parents in play therapy, in addition to improving social skills and abilities, can also provide positive emotional support and the child's ability to care for others.

The results of research that has been done showed that the modified storytelling of the use of finger puppets decreased anxiety in children who were hospitalized with a value of $p = 0.000$. Storytelling can provide a pleasant effect for children, so the brain will stimulate endorphins that can inhibit anxious stimulus sent to the BISA brain's [15]. Research conducted [3] also showed a significant influence of storytelling in play therapy in lowering anxiety levels in preschool children with hospitalization. Another study conducted [16] showed lower anxiety levels in preschool-age children hospitalized after getting storytelling therapy.

Researchers performed a storytelling modification strategy by using a finger puppet effectively to reduce anxiety. The results showed the effectiveness of finger puppet games against decreased fear in children before surgery, during, and postoperative [17]. Other studies have shown finger puppets may lower anxiety in children with leukemia

in hospitals [18]. Finger puppets also showed significant differences in reducing anxiety in children with thalassemia [19]. During the implementation of the study, there were several stages carried out by researchers, including the introduction stage, researchers involving parents and companion nurses in a special playroom, the initial phase of implementation, namely children were assessed the level of anxiety using the FAS scale before the intervention. The stage of implementation of children shared storybooks about animals accompanied by their parents, researchers, and nurses while reading stories using finger puppets to demonstrate the activities of the animals being told. This storytelling activity lasted for 10 minutes and was carried out one time. Then the evaluation stage was carried out 30 minutes after the intervention, and the children assessed anxiety levels again to evaluate the results.

Play therapy activities with storytelling given to preschool-age children help open the mind and distract children from stressing conditions into not scary situations. In addition, it can also train children's creativity in their development, such as intellectual ability, sensitivity, the subtlety of mind, emotions, art, fantasizing, and imagination of children. It develops the power of the left brain and the right brain so that storytelling therapy can effectively reduce anxiety in children due to hospitalization [20]. Furthermore, researchers can further examine more deeply the effectiveness of parental involvement in storytelling play therapy.

CONCLUSION

Storytelling strategies using finger puppets can decrease anxiety levels in preschool-age children who are hospitalized. Storytelling activities can distract children, turn stress conditions into pleasant circumstances, thus stimulating endorphins in suppressing anxiety in the brain. This pleasant condition will make the child cooperate in the treatment process while in the hospital. In addition, other benefits obtained from this activity is that it can improve children's intellectual abilities, ability to socialize, sensitivity/concern for others, thus developing the ability of the right brain and left brain. It is also necessary for the parents or families' involvement in providing emotional support to children so that the results are more effective.

Storytelling play therapy activities using finger puppets can be applied to reduce anxiety in children during hospitalization, and better parents and families are involved. It is expected that in the future, it can be used as an alternative method to reduce anxiety.

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