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Nonpharmacological Pain Management (Audiovisual Media) Reduces Pain Scale In Toddlers With Applying Infusion

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Wesiana ✉; Sovia Nur; Ugrasena; ... et. al

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Nonpharmacological Pain Management (Audiovisual Media) Reduces Pain Scale In Toddlers With Applying Infusion

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Abstract. Studies have continued to highlight that in hospitalized children inadequate pain management is a frequent occurrence. Applying infusion being in hospital can be a painful and frightening experience for children and their parents. Pain that is not treated has a physical and psychological impact on the child. Action is needed to reduce pain, both pharmacological and non-pharmacological actions. One of the non-pharmacological actions that can be done easily in toddlers is the distraction technique with audiovisual media. This study aims to determine the effect of distraction techniques with audiovisual media on the pain scale in a toddler when infusion in Surabaya Hospital. The study design was a quasi-experimental post-test only design with a sample of 36 toddlers who were treated in the emergency room at the Hospital in Surabaya with systematic random sampling. The independent variable in this study is the distraction technique with audiovisual media and the dependent variable is the pain scale at the time of infusion. Data were analyzed using the Mann-Whitney test of significance $\alpha = 0.05$. The results of the study showed that of 36 toddlers, namely 18 children in the experimental group and 18 children in the control group. Pain during infusion in children is measured directly using the VAS scale from Wong-Baker and the FLACC scale. Mann Whitney test results with significance level $\alpha = 0.05$ obtained the value of $P = 0.016$ using the VAS scale and the value of $P = 0.029$ using the FLACC scale which means that there is an influence of distraction techniques with audiovisual media on the pain scale in a toddler when Applying infusion. The technique of distraction with audiovisual media during infusion has significantly affected the scale of pain, Toddler who are infusion given distraction techniques have a lower pain scale when compared who are not treated.

INTRODUCTION

Infusion is a procedure that can cause pain [14]. Children undergoing treatment at the hospital basically give a bad reception response when an infusion is inserted, including children who become more aggressive and uncooperative with health workers. This condition makes it difficult for nurses to carry out nursing actions [17].It is for these reasons that infants and children may experience unrelieved pain more often than adults as it goes unrecognized, untreated, or poorly managed. Effective pain management is every child's right. Regardless of a person's age, health professionals have a responsibility to alleviate pain and to manage it effectively for all patients under their care [14].

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The findings in a study conducted by Azary [10] invasive procedures that are mostly performed on children are infusions with a total of 26 respondents or (86.7%), while invasive procedures for taking blood as many as 4 people or (13 ,3%). Thus, it is obtained that the insertion of infusion occupies the first level in invasive procedures that cause pain in children. This is supported by research by Walco [2] which examined the prevalence of pain and the main source of pain in 200 children who were hospitalized in children's hospitals. The results of this study are not much different from the research of Mariyam and Widodo [6], the pain level of respondents when infusion is done, most of them experience severe pain (scale 5), namely 42.9% as many as 12 children, very painful (scale 4), which is 32.1% as many as 9 children, and more pain (scale 3), namely 25% as many as 7 children with an assessment of the level of pain using the Wong Baker Faces Pain Rating Scale

In toddler, audiovisual distraction techniques are very effective in diverting pain. When children are more focused on watching cartoons, it makes pain impulses stimulate hormones to the hypothalamus and pain impulses do not flow through the spine, messages do not reach the brain due to inhibitory cells in the brain. The dorsal horn of the spinal cord contains enkafalin which blocks the transmission of pain impulses, so the child does not feel pain during infusion [14].

Based on the description above and seeing the phenomena that occur in the field, researchers are interested in conducting research on "the influence of distraction techniques with audiovisual media on pain scales in toddlers (1-3 years) when infusion is placed at RSI Jemursari Surabaya

METHOD

This type of research is quantitative using a quasi-experimental design with a post-test only design. The population in this study were 59 toddlers (1-3 years) when an infusion was placed at Hospital Surabaya. The sample size in this study was 36 respondents. Divided into 2 groups consisting of 18 experimental groups and 18 control groups. The experimental group was given an intervention distraction with audiovisual media, the cartoon movie, while the control group was given an intervention of BHSP (Building Mutual Trust) at the Surabaya Hospital. Sampling using systematic random sampling. The instrument are using an observation sheet VAS scale from Wong Baker and the FLACC scale.Analysis used Mann Whitney statistical test with a significance level of = 0.05 to determine the effect of the intervention given to both groups.

RESULT

TABLE 1. Frequency distribution of respondents based on the age of children at Surabaya Hospital

Todler Age	Experimental group		Control group	
	N	%	N	%
1 years	3	16.7	1	5.6
2 years	11	61.7	10	
3 years	4	22.2	7	38.9
Total	18	100	18	100

2020

Based on table 1 shows that the experimental group and the control group of 36 respondents mostly were 2 years old.

TABLE 2. Frequency distribution of respondents based on the age of children at Surabaya Hospital

Gender	Experimental group		Control group	
	N	%	N	%
Male	11	61.1	9	50
Female	7	38.9	9	50
Total	18	100	18	100

TABLE 3. Frequency distribution of respondents based on mother's involvement during infusion at Surabaya Hospital March 2020

Mother's Assistance	Experimental group		Control group	
	N	%	N	%
Involved	9	50	6	33.3
Not involved	4	22.2	6	33.3
Only present	5	27.8	6	33.3
Total	18	100	18	100

Based on table 3 shows that the experimental group most of the mothers were involved in pain management while the child was infusion and the control group on average had the same value in each category.

TABLE 4. Distribution of the frequency of Toddler Experience Infused Before at the Surabaya Hospital March 2020

Toddler Experience Infused Before	Experimental group		Control group	
	N	%	N	%
Ever	11	61.1	11	61.1
Never	7	38.9	7	38.9
Total	18	100	18	100

Based on table 5, it shows that the experimental group and control group mostly have experience in previous infusions before.

TABLE 5. Distribution of the difference pain scales in the experimental group and the control group using the VAS scale and the FLACC scale in toddlers during infusion installation at the Surabaya Islamic Hospital

Pain scale	Skala VAS dari Wong Baker				Skala FLACC			
	Experimental group		Control group		Experimental group		Control group	
	N	%	N	%	N	%	N	%
Mild	9	50	2	11.1	6	33.3	1	5.6
Moderate	5	27.8	6	33.3	7	38.9	6	33.3
Severe	4	22.2	10	55.6	5	27.8	11	61.1
Total	18	100	18	100	18	100	18	100

Skala VAS dari Wong Baker P = 0,016
Skala FLACC P = 0.029

Based on table 6 shows that on the pain scale of respondents who underwent infusion in both groups using the VAS scale and the FLACC scale, it was found that the pain scale of the intervention group was lighter than the control group. The results of the Mann Whitney test with SPSS for Windows with a significance level of = 0.05, the value of P = 0.016 means P > from, then Ho is rejected and H1 is accepted, meaning that there is an influence of distraction techniques with audiovisual media on the pain scale in toddler age children when an infusion is placed in the Surabaya hospital.

CONCLUSION

The pain scale of respondents who underwent infusion in both groups using the VAS scale and the FLACC scale, it was found that the pain scale of the intervention group was lighter than the control group. The results of the Mann Whitney test with SPSS for Windows with a significance level of = 0.05, the value of P = 0.016 means P < from, then Ho is rejected and H1 is accepted, meaning that there is an influence of distraction techniques with audiovisual media on the pain scale in toddler age children when an infusion is placed in the Surabaya hospital.

According to Wong [3], unbearable severe pain is a condition in which the child shows an attitude and facial expression to endure pain such as frowning, clenching the jaw with a shaking chin, kicking, stomping feet, crying and even screaming and is difficult to calm down. Moderate pain is a condition in which the child shows an attitude and facial expression to endure pain, such as frowning, clenching his fists, grimacing, and complaining of pain, and can be soothed by touch or hugs. While mild pain is a condition in which the child endures pain by showing a restless attitude, tense, squirming, whimpering, and complaining of pain but can be diverted. Pain response due to infusion can be relieved by non-pharmacological management, one of which is distraction techniques.

Distraction is a method or technique that can be used to reduce pain by distracting the client from pain. There are several types of distractions including visual distractions, auditory distractions, touch distractions, breathing distractions, guided imagination distractions, intellectual distractions, and audiovisual distractions. A combination of auditory distraction and visual distraction that is used to divert the patient's attention to things that make him uncomfortable, anxious, or afraid by displaying favorite shows in the form of images, colors, stories, and emotions (happy, sad, exciting, and excited). contained in the cartoon is an element of the right brain and the sound that appears from the film is an element of the left brain. So that by providing visual interactive presentations (pictures) and videos (dynamic images), the concentration of children on the animated cartoons seen will increase and pain in children is diverted [9].

The results of the study are in line with several studies which say that non-pharmacological therapy has a significant effect on children's pain response with infusion procedures [5] [9] [12]. Sarfika's research said that there was a significant difference in the average pain scale between children who were given the distraction technique of watching animated cartoons and children who were not given the distraction technique during infusion [7].

According Asmadi [1] In toddlers, audiovisual distraction techniques are very effective in diverting pain, this is because audiovisual distraction is a method or technique that can be used to reduce pain by diverting the child's attention from pain during infusion. Distraction techniques, one of which is watching videos that are liked by the client, can reduce the patient's awareness of pain and even increase pain tolerance. So that the distraction technique by watching videos can be done at the time of infusion so as not to cause trauma to the child that no one is hurt by the infusion or abocath needle. Watching a big screen movie with "surround sound" through a cell phone can effectively relieve pain in children. In line with research [9] [15] [16]], audiovisual distraction improves the child's response to infusions by stimulating the descending control system of the brain. Therefore, the technique of audiovisual distraction is applied to children who are undergoing treatment at the hospital and receive Intra Vena installation. The combination of auditory (audio) distraction with visual (visual) distraction is called audiovisual distraction, which is used to divert the patient's attention to things that make him uncomfortable, anxious, or afraid by displaying favorite shows or in the form of moving pictures and sounds or animations. with the hope that the patient is cool with the spectacle so as to ignore the discomfort and show a comfortable response and good acceptance

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