

## The Effectiveness of Puzzle Play Therapy in Reducing Anxiety Due to Hospitalization in Preschool Age Children (3-6 Years) in the Sakura Room at Tenriawaru Bone Regency Hospital

Andi Satriana<sup>1</sup>, Dewi Mulfiyanti<sup>2</sup>, Megawati<sup>3</sup>, Sumarni<sup>4</sup>

<sup>1,2,3</sup> D-III Nursing Study Program, Faculty of Science and Health, University of Andi Sudirman

<sup>4</sup> D-III Midwifery Study Program, Faculty of Science and Health, University of Andi Sudirman

Email: andisatriana.qiandm2@gmail.com

---

### Article Info

#### Article history:

Received April 30, 2023

Revised May 05, 2023

Accepted June 10, 2023

---

#### Corresponding Author:

**Andi Satriana**

D-III Nursing Study Program,

Faculty of Science and Health,

University of Andi Sudirman ;

Email:

andisatriana.qiandm2@gmail.com

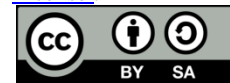
---

### ABSTRACT

Hospitalization is a planned or emergency process that requires the child to undergo treatment in hospital and undergo a therapy program until he is sent home. Hospitalization of children can cause anxiety and stress at all ages. Anxiety in children can be overcome by channeling feelings of anxiety into a fun play activity, so that it is hoped that it can support the healing process and be cooperative in every nursing action. Puzzle play therapy is one of the play therapies that can be given to preschool-aged children while undergoing hospitalization. Through the activity of playing puzzles, it is hoped that it can provide a feeling of joy and be an effective way to forget about anxiety for children. The aim of implementing evidence-based nursing practice is to overcome anxiety in preschool-aged children during hospitalization. This type of research uses a quasi-experimental method with a one group pretest posttest design. Data were collected using the Hamilton Rating Scale for Anxiety (HARS) questionnaire. The sample was determined using purposive sampling with a total of 24 respondents. The statistical results of the paired sample t-test showed a p value of 0.000 ( $p < \alpha 0.05$ ) so it can be concluded that There is an effect of puzzle playing therapy on anxiety in hospitalized children. This research suggests puzzle playing therapy to hospitalized children as providing an effective way to reduce anxiety.

Keywords: Puzzle Play Therapy, Anxiety, Hospitalization, Preschool

This article is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).



---

## 1. INTRODUCTION

Children are individuals who are in the process of growth and development, have specific needs (physical, psychological, social and spiritual) that are different from adults. Children's physical/biological needs include food, drink, water, elimination, shelter and warmth. Psychologically, children need love and affection, a sense of security or freedom from threats (Satriana, 2022). A child's good/sick condition which requires a child to be hospitalized will result in the child and parents not only being faced with the child's physical health problems but also psychological ones because both the child and parents have to adapt to an unfamiliar environment (Gerungan, 2020).

Hospitalization is a procedure, either planned or emergency, which requires the child to be treated in hospital and receive therapy until he is allowed to go home again (Tubalawony, 2021). Children who fall ill and do not receive optimal care at home require the child to receive intensive care at the hospital. Children can experience stress when they are hospitalized. Physical conditions experienced by children, such as illness, treatment procedures, and health checks at the hospital can be a source of stress for children while they are in the hospital.

Children who experience stress can experience sleep disorders, decreased appetite, and developmental disorders, which can hinder the healing process of diseases in children (Harsismanto, 2019).

Anxiety is an excessive feeling of anxiety, an impending disaster, worry or fear of real or perceived threats (Asmarawanti & Lustyawati, 2020). Anxiety experienced by children can cause children to experience feelings of separation from their playmates and the environment where they live due to hospitalization. Anxious children will be tired because they cry constantly, refuse to interact with nurses, are fussy, cry asking to go home, refuse to eat, and are less cooperative with care (Sari et al., 2023). Atraumatic treatment is one way to reduce anxiety. Atraumatic care services are a type of therapeutic care that nurses in child health services provide to children by doing things that help them reduce physical and mental stress (Anisha & Fitriana Lestari, 2022). Through their actions, nurses can provide atraumatic care nursing interventions.

Preschool-aged children have more developed fine and gross motor skills than toddlers, and their growth and development is supported by a variety of educational games. According to a literature review conducted by Forouzandeh et al., (2020) it is stated that playing can help children in hospital feel better. Meanwhile, research conducted at Tamil Naidu supports this literature review by showing that playing significantly reduces children's anxiety (Zengin et al., 2021). Play can also be used as a pre-treatment tool. Children are invited to play in the admission room before entering the treatment room. This action has proven effective in reducing tension and anxiety in children in Hamadan, Iran (Sadeghian, Seif, Ahmadi, & Khalili, 2019).

According to Ersyad Ithok Abdillah et al. (2022) play therapy is an important part of the treatment process for children to control anxiety and reduce stressors. The art of putting together puzzles is one of the best types of games that can be played by preschool children. According to Gerungan (2020), puzzles are a type of educational game that teaches children how to arrange pieces into one whole. Puzzle games have advantages because of the many colors and puzzles that attract children's interest in learning and playing (Carennina Clara Dita & Rokhaidah, 2018). Research conducted by Tumiwa (2021) states that playing therapeutic puzzles can reduce anxiety in preschool children during hospitalization. In line with this, research conducted by Aizah et al. (2017) stated that children's anxiety levels during hospitalization were reduced when they participated in puzzle therapy. The application of this intervention aims to overcome anxiety in preschool-aged children during hospitalization by implementing puzzle play therapy.

## **2. RESEARCH METHODS**

Evidence Based Nursing (EBN) is defined as the synthesis and use of scientific findings (research results) from a randomized control trial study. Feng et al. (2021) says that EBN is a synthesis and use of scientific findings from various types of research, including randomized control trials, descriptive research, information from case reports and expert opinions. Gerungan (2020) defines EBN as an integration of the best research evidence that has gone through the stages of review and synthesis that are used as a basis for nursing practice and provide benefits for recipients of nursing services.

As a basis for developing subsequent research questions. The effectiveness of applying research results in nursing practice is known through process evaluation and results evaluation. The evaluation results are used as a basis for developing subsequent research questions for relevant topics. So that nursing science will continue to develop.

The sampling technique uses a purposive sampling technique which is based on certain considerations made by the researcher himself, based on previously known characteristics or characteristics of the population ( Notoatmodjo , 2010). Researchers take samples based on sample criteria including inclusion criteria and exclusion criteria, where these criteria determine whether or not the sample can be used as research material. This research wants to test the

differences in averages before and after the intervention, therefore the test used is the hypothesis test of paired average differences.

The formula used is

$$n = \left[ \frac{(Z_{\alpha} + Z_{\beta}) \cdot S_d}{d} \right]^2$$

The subjects in this research were 24 respondents from preschool age children (3-6 years) who were hospitalized. This research was carried out in the Sakura Room, Tenriawaru District Hospital, District. Bone in April 2023.

This research used a Quasi Experimental Method without a control group, with a One Group Pre-Test Post-Test design without a comparison or control group using puzzle playing therapy techniques for anxiety in children undergoing hospitalization. The preparation stages are: Request a permission letter from the Lapatau Bone Akper research and service institute. After obtaining a research permit letter, the researcher requested research permission via a letter presented to the Tenriawaru Regional Hospital Bone Regency.

### 3. RESULTS AND DISCUSSION

**Table 1. Frequency distribution of characteristics of children with hospitalization based on gender**

Variable	Category	Frequency (n)	Percentage (%)
Gender	Man	10	41.7
	Woman	14	58.3
Total		24	100

**Table 2. Frequency distribution of anxiety levels before and after being exposed to playing**

Anxiety Level	Frequency before Given therapy	Total Percentage	Frequency after Given therapy	Total percentage
No anxiety	0	0%	15	58.4%
Mild anxiety	6	25%	8	33.3%
Moderate anxiety	12	50%	2	8.3%
Worry	6	25%	0	0%
Heavy				
Total	24	100%	24	100%

**T a bell. 3. Average anxiety score in pre-school children before and after being given puzzle playing therapy**

Anxiety variable	Mean	elementary school	S.E	P Value
Worry Before therapy	24.42	5,174	1,056	0.00
Anxiety after therapy	14.25	3,651	0.738	0.00

Based on table 1 above, it shows that from 24 respondents it is known that children who are hospitalized in the sakura room at Tenriawaru Regional Hospital, District. There were 14 female respondents (58.3%), while there were 10 male respondents (41.7%). According to Harsismanto (2019), boys get sick more often than girls, but it is not yet known exactly why

this is. Even though gender is not the dominant factor in the emergence of anxiety, there is research which says that women have a higher level of anxiety compared to men, namely 2:1 (Anisha & Fitriana Lestari, 2022). Anxiety disorder is a condition characterized by feelings of fear accompanied by somatic complaints as indicated by hyperactivity of the autonomic nervous system and is a non-specific symptom that is often found and is often a normal emotion (Nour Sriyanah et al., 2022)

Based on table 2, distribution of the frequency characteristics of anxiety levels before being given puzzle playing therapy, the majority of respondents experienced mild anxiety, 6 respondents (25.0%), moderate anxiety, 12 respondents (50.0%), and severe anxiety, 6 respondents (25.0%). 0%), with a standard deviation of 5.174. While the distribution of frequency characteristics of anxiety levels after being given puzzle playing therapy, the majority of respondents who did not experience anxiety were 14 respondents (58.4%), who experienced mild anxiety as many as 8 respondents (33.3%) and moderate anxiety as many as 2 respondents (8.3%), with a standard deviation of 3.615. This is not in line with research by the Bina Husada psychology lecturer team (2013). Which shows that of the 36 respondents before being given coloring play therapy, the average anxiety score was 24.44 in the moderate anxiety category with the median or middle value of the anxiety score being 24.00 in the moderate anxiety category and a standard deviation of 8.426, which can then be seen that the lowest anxiety score or minimum value is 7 and the highest or maximum value is 40. Some scientific evidence shows that the hospital environment itself is a cause of stress for children and their parents, both the physical environment of the hospital such as buildings or treatment rooms, equipment, the distinctive smell, the white clothes of health workers and the social environment, such as fellow child patients or the interactions and attitudes of health workers themselves, therefore children cause aggressive reactions by being angry and rebellious, verbal expressions by saying angry words, not wanting to work the same as nurses, and dependence on parents (Asmarawanti & Lustyawati, 2020). In terms of reducing anxiety due to hospitalization, it is very necessary because apart from making children more cooperative, it also supports the healing process. Through play therapy, children can minimize or reduce anxiety during treatment and children can have positive coping which will help healing. In providing nursing care, family involvement is required, this is very important considering that children always need their parents while in hospital, such as in play activities or other care programs such as medication. The importance of family involvement can influence the child's healing process. It is often found that children are left alone without someone to accompany them, such as anxiety and even stress. If this is allowed to continue, healing efforts will be difficult to achieve. If this is the case, cooperation or involvement of parents with health workers in the hospital while the child is still being treated is very necessary (Sriyanah et al., 2021)

Table 5 is the result of calculating the Paired Sample T test. It can be seen in the table that the average frequency of anxiety before coloring picture play therapy was 24.42 with a standard deviation of 5.174. The frequency of anxiety after coloring in play therapy showed an average of 14.205 with a standard deviation of 3.615. It can be seen that the mean value of the difference in anxiety frequency measurements before coloring picture play therapy and after puzzle play therapy was 10.167 with a standard deviation of 2.599. The statistical test results obtained a P value = 0.000 (P value <  $\alpha$  = 0.05), so it can be concluded that there was a decrease in children's anxiety levels with hospitalization before and after coloring play therapy in the Sakura room at Tenriawaru District Hospital. Bone.

Games that children like will make children feel happy playing the game. Meanwhile, if children don't like certain types of games, they won't enjoy the games they play. During the study, researchers found that not all children experienced a decrease in anxiety scores because perhaps they did not enjoy the games they were playing. Respondents did not experience a

decrease in anxiety scores, this could also be due to the child's physical condition due to illness, parenting patterns and lack of family support. Children who are used to being pampered and rarely invited to play with their peers will find it difficult to socialize and accept the presence of other people around them. Meanwhile, children who receive little attention at home will seek a lot of attention by being fussy and tending to act aggressively (Zengin et al., 2021).

The important interventions that nurses carry out with children are in principle to minimize stressors, prevent feelings of loss, minimize fear of treatment and pain, and maximize the benefits of hospital care. The thing that must be remembered is that playing is an effective way to overcome the impact of hospitalization (Ersyad Ithok Abdillah et al., 2022).

The anxiety experienced by children during nursing procedures is influenced by hospitalization anxiety, which consists of three phases. The first stage of protest is expressed by the child's reactions such as crying, screaming, looking for and holding tightly to his parents, refusing to meet and attacking unknown people. The second is the despair phase which is characterized by the child being inactive, withdrawn from other people, sad, not interested in the environment, uncommunicative, and refusing to eat or drink. In the third phase, namely the acceptance phase, children begin to show interest in the environment and have shallow interactions with other people or caregivers. On the first day a child is hospitalized, it means the child is in the first phase, namely the protest phase. This indicates that the child has not gone through the adaptation phase to reach the acceptance stage, because this acceptance stage usually occurs after the child has been hospitalized for several days or for more than two days. The cognitive development characteristics of preschool-aged children also influence anxiety during nursing procedures. Preschool children tend to think magically. They consider all procedures, whether they cause pain or not, as something that will hurt their body. In this case, the appropriate play method is puzzle play therapy. Puzzle play therapy was chosen as the intervention used because puzzle play therapy can give children the opportunity to express freely and is very therapeutic (as a game/therapeutic play) which makes children express their feelings, as how to communicate without using words.

#### **4. CONCLUSION**

In the Analysis of the Effectiveness of Puzzle Play Therapy on Anxiety in Hospitalized Children in the Sakura Room, Tenriawaru Regional Hospital, District. Bone, the results of calculating the Paired Sample T test, which can be seen in the table, the average frequency of anxiety before coloring picture play therapy was 24.42 with a standard deviation of 5.174. The frequency of anxiety after puzzle playing therapy was found to be an average of 14.205 with a standard deviation of 3.615. It can be seen that the mean value of the difference in anxiety frequency measurements before coloring picture play therapy and after puzzle play therapy was 10.167 with a standard deviation of 2.599. The results of statistical tests obtained a P value = 0.000 ( $P \text{ value} < \alpha = 0.05$ ), so it can be concluded that there was a decrease in children's anxiety levels with hospitalization before and after puzzle play therapy was carried out in the Sakura room at Tenriawaru Regional Hospital, District. Bone. So researchers recommend the application of play therapy with puzzles as an independent therapy that can be carried out by nurses to overcome anxiety problems in children due to hospitalization.

#### **ACKNOWLEDGEMENTS**

We would like to thank the University of Andi Sudirman research and community service center for material support in the realization of research.

#### **REFERENCES**

[1] Aizah, S., Wati, S. ., Wahjono, SI, Hapsari, D., Patintingan, A., Panogar Pasaribu, J.,

- Siregar, D., Silalahi, E., Nursing, MF, Ilmu, D., University, K., Harapan, P., Faculty, D., and Science, K., Faculty, CE, Dan, K., Health, I., Harapan, UP, Muf seeni, M., ... Riwayati. (2017). Efforts to Reduce Hospitalization Stress Levels with Picture Coloring Activities for Children Aged 4-6 Years in the Orchid Room at Gambiran Hospital, Kediri. *Scientific Writing* , 53 (1), 47–54.
- [2] Anisha, N., & Fitriana Lestari, R. (2022). Application of Puzzle Play Therapy to Overcome Anxiety Levels in Preschool Age Children (3-6 Years) During Hospitalization. *Community of Publishing in Nursing (COPING)* , 10 (6), 624–629.
- [3] Asmarawanti, & Lustyawati, S. (2020). Application of Coloring Picture Play Therapy to Reduce Anxiety Levels in Hospitalization of Pre-School Age Children (3-6 Years). *Scientific Journal of Health and Nursing* , 83–92.
- [4] Carennina Clara Dita, & Rokhaidah. (2018). Application of Evidence Based Nursing: Effectiveness of Play Coloring Picture Therapy on Children's Anxiety in Hospitalization. *Health Bulletin: Scientific Publications in the Health Sector* , 2 (2), 1–14. <https://doi.org/10.36971/kebesar.v2i2.41>
- [5] Ersyad Ithok Abdillah, M., Nurhayati, S., & DIII Nursing Academy Dharma Wacana Metro, P. (2022). Application of Coloring Picture Play Therapy to Reduce Anxiety Level in Preschool Age Children (3-5 Years) Hospitalization Application of Coloring Picture Play Therapy to Reduce Anxiety Level in Preschool Age Children (3-5 Years). *Journal of Young Scholars* , 2 (2), 220–226.
- [6] Feng, Y., Lin, Y., Zhang, N., Jiang, X., & Zhang, L. (2021). Effects of animal-assisted therapy on hospitalized children and teenagers: A systematic review and meta-analysis. *Journal of Pediatric Nursing* , 60 , 11–23. <https://doi.org/10.1016/j.pedn.2021.01.020>
- [7] Forouzandeh, N., Drees, F., Forouzandeh, M., & Darakhshandeh, S. (2020). The effect of interactive games compared to painting on preoperative anxiety in Iranian children: A randomized clinical trial. *Complementary Therapies in Clinical Practice* , 40 (February), 101211. <https://doi.org/10.1016/j.ctcp.2020.101211>
- [8] Gerungan, N. (2020). Coloring Pictures on the Anxiety Level of Preschool Age Children Treated at RSUP Prof. Dr. RD Kandou Manado. *Scholastic Journal of Nursing* , 6 (2), 105–113.
- [9] Harsismanto, LY and IA (2019). Effectiveness of Touch and Talk Therapy and Storytelling Therapy for Anxiety in Children Aged 3-6 Years. *Muhammadiyah Nursing Journal* , 07 (April), 22–29.
- [10] Notoatmodjo, S. (2010). *Health Research Methodology* . Rineka Cipta.
- [11] Nour Sriyanah, Suradi Efendi, & Sri Mulyani. (2022). Description of the Characteristics of Parents on the Level of Anxiety of Parents whose Children are Cared for in the PICU Room of Dr. Wahidin Sudirohusodo Hospital Makassar. *International Journal of Public Health Excellence (IJPHE)* , 2 (1), 376–384. <https://doi.org/10.55299/ijphe.v2i1.277>
- [12] Sari, PI, Pordaningsih, R., Erwinsyah, E., & Prasetya, RD (2023). Application of Coloring Play Therapy to Reduce Hospitalization Anxiety Levels in Children Aged 3-6 Years: Case Study. *Indonesian Nursing Scientific Journal* , 4 (1), 109–115. <https://doi.org/10.22437/jini.v4i1.25069>
- [13] Satriana, A. (2022). *Textbook of Pediatric Nursing* (1st ed.). CV. Eastern Educational Light.
- [14] Sriyanah, N., Efendi, S., Nurleli, N., & Mardati, M. (2021). The Relationship between Parental Participation and the Impact of Hospitalization on Preschool Children in the Al-Fajar Room at RSUD Haji Makassar. *An Idea Health Journal* , 1 (1), 01–05. <https://doi.org/10.53690/ihj.v1i1.8>
- [15] Tubalawony, S.L. (2021). Literature Review The Effect of Coloring Picture Play Therapy on the Anxiety Levels of Pre-School Age Children (3-6 Years) Due to Hospitalization.

- Moluccas Health Journal* , 3 (2), 42–57. <https://doi.org/10.54639/mhj.v3i2.829>
- [16] Tumiwa, FF (2021). The Influence of Play Therapy (Storytelling Technique) on the Impact of Hospitalization in Pre-School Age Children at Irina E Rsup Prof. Dr. RD Kandou Manado. *Coping: Community of Publishing in Nursing* , 9 (1), 67. <https://doi.org/10.24843/coping.2021.v09.i01.p09>
- [17] Zengin, M., Yayan, E. H., & Düken, M. E. (2021). The Effects of a Therapeutic Play/Play Therapy Program on the Fear and Anxiety Levels of Hospitalized Children After Liver Transplantation. *Journal of Perianesthesia Nursing* , 36 (1), 81–85. <https://doi.org/10.1016/j.jopan.2020.07.006>