



## Conference Paper

# Effect of Puppet Play Therapy on Anxiety in Preschoolers with Thalassemia at the Thalassemia Polyclinic at Al-Ihsan Baleendah Hospital, Bandung Regency

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## Abstract

Thalassemia is one of the top eight catastrophic diseases. Data from *Yayasan Thalassemia Indonesia dan Perhimpunan Orang tua Penderita Thalassemia Indonesia (YTI/POPTI)* have shown that in Indonesia the number of cases of this disease increased from 2011 to 2015. Preschool-aged children who experience thalassemia every month are subjected to invasive measures such as blood transfusions. Repeated blood transfusions make children feel threatened and can trigger various responses, one of which is anxiety. Anxiety is an emotional response to something dangerous, closely related to feeling uncertain and helpless. Puppet play therapy can reduce anxiety in children with thalassemia who undergo blood transfusions. This study aims to determine the effect of puppet play therapy on anxiety of preschool children (3-6 years) with thalassemia at the Thalassemia Polyclinic at Al-Ihsan Hospital, Bandung. The design used in this study used a quasi-experimental study with a one group pre-post test design without control approach using the Wilcoxon test. The number of samples in this study were 30 respondents who were taken by total sampling technique. The instrument used refers to the content / research theme developed from the Spence Children Anxiety Scale. The results of the Wilcoxon statistical test obtained a significance figure, namely  $p = 0.009$ , thus  $p < \alpha (0.009 < 0.05)$ , then  $H_0$  is rejected. It can be concluded that there are differences in the level of anxiety of children with thalassemia before and after being given puppet play therapy.

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**Keywords:** puppet play therapy; worry; preschool; Thalassemia

## 1. Introduction

Indonesia is one of the countries in the world thalassemia belt, namely a country with a high frequency of thalassemia gene. This is evident from epidemiological studies in Indonesia which found that the frequency of the beta thalassemia gene ranges from 3-10% [1]. Thalassemia is one of the top eight catastrophic diseases. Data from

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the Indonesian Thalassemia Foundation and the Association of Parents of Indonesian Thalassemia Patients (YTI / POPTI) has been known that in Indonesia the number of cases of this disease has continued to increase from 2011 to 2015. Data on the condition of children with thalassemia major in Indonesian have not been widely published, but various studies clearly show growth and development disorders and behavior which are later associated with a high incidence of depression, anxiety, and other psychosocial disorders [1].

Anxiety is an emotional assessment and response to something dangerous. Anxiety is closely related to uncertainty and helplessness. Conditions experienced subjectively and communicated in interpersonal relationships. Anxiety is also an excessive feeling of fear, anxiety, impending disaster, worry or fear of a real or perceived threat. The Hand Puppet Show Model provides a change in behavior in preschool children.

The child's reaction to chronic illness or disability depends largely on the child's level of development, temperament and availability of coping mechanisms, on the reactions of family members or significant others, and to a lesser extent on the condition itself.[12] Children who are hospitalized are prone to stress. Stress is a part of life that is experienced by children every day as it is in adults. Small amounts of stress can help children develop effective coping skills, but stress that reaches large amounts can be dangerous. [12]

Chronic disease affects children at all ages, but the developmental aspects of each age group determine the stress and specific risks for the child. [17] Mental disorders that develop before 6 years of age can affect critical aspects of a child's emotional, cognitive and physical development [16] (Anxiety or anxiety is an emotional assessment and response to something dangerous. [5]. Anxiety is a fear that is not clearly accompanied by feelings of anxiety response of preschool children, especially those aged 3 to 6 years who experience three phases of separation, namely protest, hopelessness, and rejection [18]). Children often perceive an invasive medical procedure with fear and anxiety, which can cause them to be less cooperative with nurses [8]. Nurses can do the main thing in the approach to children, namely fostering a therapeutic relationship and a sense of trust with the child so that life can be understood from the child's perspective and the child's needs can be anticipated.

The natural coping mechanisms that children learn are very important in their ability to cope with the disorders they suffer from. [6] Preschoolers prefer to play because a child's life is playing. Storytelling games help children to understand other people's points of view, build social problem solving skills and be more creative. They can have imaginary friends. Imaginary friends have the benefit of accompanying the child when

he feels lonely. Imaginary friends are a healthy sign and allow children to distinguish reality from fantasy.[18] Television, videos, electronic games and computer programming also aid in the development of basic skills and divert a child's anxiety and fear. The use of this therapy generates benefits in communication, supports a positive atmosphere, increases creativity, encourages cooperation and integration into a group and changes attitudes. [13] Children who get simulations will experience faster development than children who are less and don't even get simulations. [4]

Among the many functions of playing in the hospital, play functions to reduce stress, as a transition and relaxation so that children feel safer in a strange environment while in the hospital, children also easily express their feelings so that nurses can connect with children which can have a positive impact on treatment and pediatric medicine.

Mental health professionals are starting to explore the value of dolls with children, for both diagnostic and therapeutic purposes. The first pioneers named Adolf Woltmann and Loretta Bender, they used puppet shows to help children in mental hospitals to freely express and find solutions to each of their problems through the identification process using puppets.

Puppet play therapy is a form of play therapy that involves the use of dolls by health professionals for diagnostic and therapeutic purposes. Puppet play therapy has become a practice in contemporary child psychotherapy. In addition, the use of dolls to promote healing and development has become widespread in recent years. Dolls are now being applied effectively throughout the human life cycle from infancy to old age. In addition, parents and professionals alike find doll games useful for children in both medical and educational spheres. Thus, hand puppet play therapy becomes an intervention in play therapy that can be applied to children in the hospital [2].

Puppet play is a moving puppet manipulated by humans. Body movements provide visual impressions: puppets convey emotions and thoughts through movements such as their hands and head. A puppeteer can also make puppet sounds. Puppet play therapy intervention can reduce anxiety in children with thalassemia by taking invasive measures such as blood transfusions. The results of the study [10] The population of the study were all children who were treated, showed a mean score of toddler anxiety at 4.40, whereas preschool was 1.80, meaning that the preschool anxiety score was lower than that of toddlers after storytelling therapy. So that the research shows that there are differences in anxiety scores at toddler and preschool age after giving storytelling therapy. However, storytelling therapy is more effective given to preschools.

Hand puppets are usually effective for communicating with children. Most of the children considered the hand puppets to be their peers and easily communicated with

them. Children bond with the hand puppet's feelings that they hesitate to reveal to adults. Hand puppets can share experiences with children and help them find solutions to their problems. The role of a nurse here is as a provider of comprehensive nursing care. In addition to taking invasive measures, nurses can provide psychosocial support with complementary therapeutic interventions in the form of play therapy according to the child's development. [8]. One of them can provide puppet play therapy to reduce anxiety in children with thalassemia which is carried out in the hospital to make it easier for nurses to provide nursing actions.

Al-Ihsan Regional General Hospital itself has a special thalassemia clinic. Based on the medical record data of preschool aged children (3-6 years) who have been diagnosed with thalassemia in the Thalassemia Polyclinic room from January to July 2019, there are 30 pediatric patients who routinely do diferal. On August 1, 2019, conducted observations at the Thalassemia Polyclinic at Al-Ihsan Baleendah Hospital, Bandung Regency. Observations were started from the time the patient was placed in a transfusion so that most children showed a response to asking for emotional support from their parents, crying to screaming very loudly, making verbal words such as pain, ouch, and aw, some were just silent with a gloomy face and even one child who went berserk so that the nurse takes the act of swaddling using a blanket so that the child can be quiet when the nursing action is performed. Several other things that nurses review by seeing clients describe themselves with body muscle stiffness, nervousness, restlessness, anxiety, such as worry or anxiety then the nurse also completes a questionnaire to the parents of children with thalassemia to 4 respondents, all children are in moderate anxiety. The Thalassemia polyclinic has never been done with play therapy for preschoolers and other ages and there is no place to store game equipment. Children slept more during the transfusion and were restless. However, some children also bring their own games from home and play singly and make their own children bored. Based on the background above, the problems in this study can identify that nurses in carrying out nursing care holistically take a role in reducing anxiety in preschool children with thalassemia.

The specific objectives in this study were to identify the anxiety of children with thalassemia before and after being given puppet play therapy and to analyze the differences between children's anxiety and thalassemia before and after being given puppet play therapy. Benefits The results of this study are expected to provide benefits for advances in the scope of child nursing science about puppet play therapy to reduce anxiety in preschool children (3-6 years) with thalassemia.

## 2. Methods and Equipment

### 2.1. Methods

This study was conducted to analyze the effect of puppet play therapy on reducing anxiety in preschool children (3-6 years) with thalassemia at the Thalassemia Polyclinic at AL-Ihsan Hospital, Bandung Regency. The research method used in this study was a quasi experiment with a one group pre-post test design without control approach. The location of the study was conducted at the Thalassemia Polyclinic of AL-Ihsan Regional Hospital, Bandung and the study was conducted in April 2019. The population in this study were parents of preschool children (3-6 years) with thalassemia at the Thalassemia Polyclinic of Al-Ihsan Regional Hospital, Bandung Regency. The sampling technique used was total sampling technique with a sample size of 30 respondents. The researcher conducted a survey of the research site, then determined the research subject. Consent information is given, which explains the aims, objectives, benefits of the research procedure, as well as the rights and obligations of being a respondent to participate in the research process. The sample selection was based on inclusion criteria, namely parents of preschool children (3-6 years). In addition, the researcher provided the opportunity for the families of potential respondents who were willing to participate in the research process to sign the consent form to become respondents. If the patient and the patient's family are willing to become respondents, the research is carried out on the respondent.

In this study, data collection used was the observation format of the Spence Children Anxiety Scale which was modified by the researcher. the results of the validity test show the calculated  $r$  value is greater than the  $r$  table ( $r = 0.444$ ) and the reliability value shows 0.658. This instrument consists of 16 question items using the statement never with a score of 1, sometimes with a score of 2, often with a score of 3 and always with a score of 4 then the questionnaire scores are added up to categorize the anxiety of preschool children with thalassemia. The anxiety category is categorized into four classifications, namely not experiencing anxiety if the score is  $<16$ , mild anxiety if the score is 17-32, moderate anxiety if the score is 33-48, and severe anxiety if the score is  $> 49$ . The analysis presented is the frequency distribution for univariate analysis while for bivariate analysis using the Wilcoxon test.

## 2.2. Equipment

In conducting this research, researchers used the following equipment: hand puppets, cameras, tablet PCs, tripods, laptops, flash drives, questionnaires, standard operating procedures and a collection of children's stories

## 3. Results

The sample in this study were preschool children aged 3-6 years who were diagnosed with thalassemia and received blood transfusions with a total of 30 respondents. This research was conducted for 4 weeks in which the respondents would give a questionnaire measuring anxiety through their parents. The first measurement was carried out on the respondent before getting the intervention. Respondents who experienced anxiety based on the anxiety measurement tool used were then given Puppet Play Therapy intervention at their next visit, about an average of 2 weeks after the first meeting. Puppet Play Therapy intervention was given for  $\pm$  20 minutes. After completing the intervention giving Puppet Play Therapy 1 time, then re-observation using the Spence Children Anxiety Scale. The measuring instrument used is a questionnaire developed from the Spence Children's Anxiety Scale.

The research results obtained are as follows:

TABLE 1: Frequency Distribution of Anxiety Levels in Children with Thalassemia before being given Puppet Play Therapy at Al-Ihsan Balaendah Hospital

| Anxiety Level    | N  | %     |
|------------------|----|-------|
| No anxious       | 0  | 0,0   |
| Mild anxiety     | 1  | 3,4   |
| Moderate Anxiety | 10 | 33,3  |
| Severe Anxiety   | 19 | 63,3  |
| Total            | 30 | 100,0 |

Based on table 1, the results of statistical analysis of the data that have been obtained on 30 research subjects, it is obtained that data is not normally distributed, the results obtained are on average many who experience severe anxiety in children with thalassemia before being given puppet play therapy, namely 19 respondents (63 3%) of 30 respondents

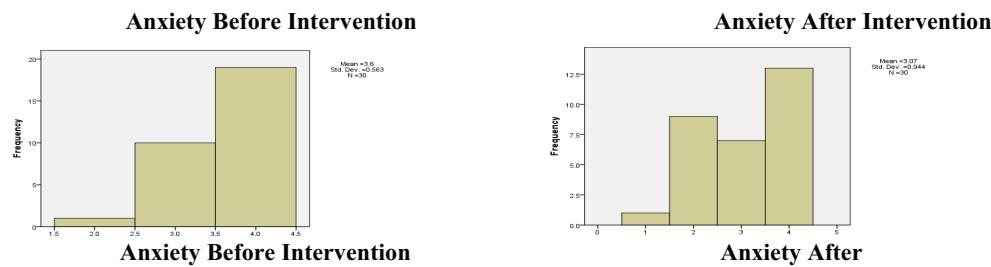


TABLE 2: Frequency Distribution of Anxiety Levels of Children with Thalassemia After being given Puppet Play Therapy at Al-Ihsan Balaendah Hospital

| Anxiety Level    | N  | %     |
|------------------|----|-------|
| No anxious       | 1  | 3,4   |
| Mild anxiety     | 9  | 30,0  |
| Moderate Anxiety | 7  | 23,3  |
| Severe Anxiety   | 13 | 43,3  |
| Total            | 30 | 100,0 |

Based on table 2, the results of statistical analysis of the data that have been obtained on 30 research subjects, it is obtained that the data is not normally distributed, the results obtained are on average anxiety in children with thalassemia before being given puppet play therapy, namely 9 respondents (30.0%) experienced mild anxiety and as many as 13 respondents (43.3%) experienced severe anxiety from 30 respondents

TABLE 3: Differences in Anxiety Levels of Children with Thalassemia Before and After being given Puppet Play Therapy at Al-Ihsan Balaendah Hospital

| Anxiety After Intervention  |                |       |                  |       |              |       |            |      |       |       |         |
|-----------------------------|----------------|-------|------------------|-------|--------------|-------|------------|------|-------|-------|---------|
|                             | Severe Anxiety |       | Moderate Anxiety |       | Mild anxiety |       | No anxious |      | Total |       | P value |
|                             | N              | %     | N                | %     | N            | %     | N          | %    | N     | %     |         |
| Anxiety Before Intervention |                |       |                  |       |              |       |            |      |       |       |         |
| <b>Severe</b>               | 13             | 43,3% | 6                | 20,0% | 0            | 0,0%  | 0          | 0,0% | 19    | 63,3% |         |
| <b>Moderate</b>             | 0              | 0,0%  | 1                | 3,3%  | 9            | 30,0% | 0          | 0,0% | 10    | 33,3% | 0,009   |
| <b>Mild</b>                 | 0              | 0,0%  | 0                | 0,0%  | 0            | 0,0%  | 1          | 3,4% | 1     | 3,4%  |         |
| <b>No anxious</b>           | 0              | 0,0%  | 0                | 0,0%  | 0            | 0,0%  | 0          | 0,0% | 0     | 0,0%  |         |
| <b>Total</b>                | 13             | 43,3% | 7                | 23,3% | 9            | 30,0% | 1          | 3,4% | 16    | 100%  |         |

The results of the Wilcoxon statistical test obtained a significance figure, namely  $p = 0.009$ , thus  $p < \alpha$  ( $0.009 < 0.05$ ), then  $H_0$  is rejected. Because the value of  $p < 0.05$ , it can be concluded that there are differences in the level of anxiety of children with thalassemia before and after being given puppet play therapy

## 4. Discussion

Anxiety is an emotional assessment and response to something dangerous. Anxiety is closely related to feeling uncertain and helpless [5]. Based on the results of the study showed that most of the respondents experienced mild anxiety, almost all of them were 1 respondent, 3.4%), and 10 respondents (33.3%) had moderate anxiety, and 19 respondents (63.3%) had severe anxiety. Western anxiety is characterized by a significant decrease in perception. tends to focus on the details and not think about anything else. all behaviors are aimed at reducing anxiety and a lot of direction is needed to focus on other areas. [16] This is supported by the condition of the respondent supported by the results of the researcher's observation that the respondent when the transfusion process was going to cry, even screamed, went berserk and refused to ask to go home and was irritable, anxious. The results of the researchers' observations also showed that children with thalassemia who were transfused asked their parents to accompany them during the transfusion process. Some even asked to hug them, some cried when their parents had to complete administration so they had to leave their children in the room. This is in line with existing theories and previous research. It is supported by research [9] that children who experience procedures that cause pain tend to show negative behavioral reactions, including children becoming more aggressive and uncooperative or hostile, and if this condition continues, it will cause developmental disorders and also complicate the implementation of medical procedures., one example is infusion. The negative reactions the child will produce are such as kicking, screaming and resistance to the degree that some people need physical control. The response of preschool-aged children who experience the action process in the hospital is refusing to be treated, the child crying because he is dealing with a new environment and seeing medical equipment, is afraid of nurses or doctors in white clothes, does not want to be left by their parents, rebels, does not want to eat, being uncooperative, fussy, and most conspicuously crying.

The results of the research after puppet play therapy were 30 respondents. Anxiety of Preschool Children (3-6 Years) with Thalassemia After Puppet Play Therapy at the Thalassemia Polyclinic, Al-Ihsan Regional General Hospital, Bandung Regency, most of the respondents did not experience anxiety 1 respondent (3.4%), 9 respondents (30.0%) mild anxiety level, and 7 respondents (23.3%) who experienced moderate anxiety (23.3%) and 13 respondents (43.3%).

After puppet play therapy, there was a decrease in anxiety in preschool children with thalassemia. This is because by doing puppet play therapy the child will feel

happy which can help reduce the child's anxiety level. The therapeutic use of storytelling relieves stress and teaches children the latest coping skills. Preschoolers do not separate imaginary experiences from real experiences, stories that teach appropriate problem-solving skills and can serve as models for real situations. This is one of the effective treatments for thalassemia patients who experience anxiety, namely puppet play therapy to reduce anxiety that occurs during the transfusion process. Puppet play therapy is a form of play therapy that involves the use of dolls by health professionals for diagnostic and therapeutic purposes. Puppet play therapy has become a practice in contemporary child psychotherapy. In addition, the use of dolls to promote healing and development has become widespread in recent years. Dolls are now being applied effectively throughout the human life cycle from infancy to old age. In addition, parents and professionals alike find doll games useful for children in both medical and educational spheres. [3] The effect of puppet play therapy on preschool child patients with thalassemia who is experiencing anxiety is very necessary so that it can reduce anxiety. Researchers made fable storytelling by making video recordings of storytelling using puppets (puppet play), this was provided by researchers by studying the fairy tales to be told, as well as learning techniques in telling stories so that the stories conveyed could be conveyed well to preschool children. Puppet play can be used by nurses in the care of pediatric patients and is effective in preoperative interventions to reduce anxiety. [11] The story is told by using facial expressions, expressive voices, using hand puppets (puppet play). Children may choose the story they want to listen to and watch from the video prepared, which is a story about: evil frogs and adventurous mice, greedy crocodiles, ants and cocoons, deer and turtles, kind-hearted elephants, crows and eagles. Where this play can be used as a therapy in the healing process of preschool child patients with thalassemia because it has a healing effect so that anxiety decreases and keeps the preschool child psychologically good. The results of this study are in accordance with research conducted by A'diilah and Somantri [10] which stated that the mean score of toddler anxiety was 4.40, while preschool was 1.80, meaning that the preschool anxiety score was lower than that of toddlers after storytelling therapy with hand puppet aids. There are five potentials. in the use of dolls, namely: generating communication, supporting a positive atmosphere / environment, increasing children's creativity, encouraging children to work together in a group and can also change children's attitudes. [13] The therapeutic use of storytelling can relieve stress and teach the child new coping skills and is a valuable act. Preschoolers cannot separate imaginary experiences from real experiences, stories that teach appropriate problem-solving skills and can serve as models for real situations.



The results of the Wilcoxon statistical test obtained a significance figure, namely  $p = 0.009$ , thus  $p < \alpha$  ( $0.009 < 0.05$ ), then  $H_0$  is rejected. Because the  $p$  value  $< 0.05$ , it can be concluded that there are differences in the level of anxiety of children with thalassemia before and after being given puppet play therapy, it can be concluded that there is an effect of puppet play therapy on reducing anxiety in preschool children aged (3-6 years). thalassemia at the Thalassemia Polyclinic at Al-Ihsan Baleendah Regional General Hospital, Bandung Regency. This can be seen from the anxiety experienced by preschool children with thalassemia after being given puppet play therapy, there is a decrease in anxiety so that most children do not experience anxiety. This result is also confirmed by research [14] showing that storytelling therapy is more meaningful than a drama method.

The use of hand puppets by nurses in a pediatric context has the benefit of reducing children's fears so as to help nurses connect with children to provide optimal care. [7] A study [8] paired T test results showed  $p = 0.816$  ( $< 0.05$ ). So it can be stated that there is no therapeutic effectiveness of hand puppet play in the control group. Paired T test results showed  $p = 0.000$  ( $> 0.05$ ). So it can be stated that there is a therapeutic effectiveness of hand puppet play in the intervention group. Preschoolers who get transfused really enjoy watching the stories told, their faces are changing, their small smiles can be seen on their faces, they are even happy and interacting with friends in the room. Storytelling therapy using puppets has a stronger effect than just telling stories. [15]

Proven that puppet play therapy is effective in reducing anxiety in preschoolers (3-6 years) with thalassemia. The role of a nurse here is as a provider of comprehensive nursing care. In addition to taking invasive measures, nurses can provide psychosocial support with complementary therapeutic interventions in the form of play therapy according to the child's development. One of them can provide puppet play therapy to reduce anxiety in preschool-aged children (3-6 years) with thalassemia who are undergoing invasive actions such as blood transfusions in the hospital, making it easier for nurses to provide nursing actions. To reduce children's anxiety from severe anxiety, several implementations include: nurses can build a trusting relationship; nurses should actively listen to clients and encourage them to discuss feelings of anxiety. the nurse must answer the client's questions directly. Verbal and nonverbal communication should lead to awareness and acceptance of the client. The nurse must remain willing to respect the client's personal space even though the client is a child, and the most important thing is the nurse's self-awareness that the nurse must try to accept the client's anxiety without becoming anxious. [16]

## 5. Conclusion

- a. Most of the respondents before being given puppet play therapy experienced severe anxiety levels of 19 respondents.
- b. Most respondents after being given hand puppet play therapy experienced mild anxiety 9 respondents.
- c. There is a significant difference before and after being given puppet play therapy to preschool children (3-6 years old) with thalassemia at the Thalassemia Polyclinic at the Al-Ihsan Baleendah Regional General Hospital, Bandung Regency with a value of  $p = 0.009$ .

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## Conflict of Interest

The authors have no conflict of interest to declare.

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