

Case Study: The Use of Storytelling Interventions to Reduce Hospitalization Anxiety in Preschool-Aged Children

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ABSTRACT

Background & Objective: Hospitalization is an experience that can cause anxiety in preschool-aged children due to separation from a familiar environment, exposure to medical procedures, and an unfamiliar hospital environment, which can disrupt the child's comfort, healing process, and emotional development. Therefore, atraumatic care nursing interventions appropriate to the child's developmental stage are needed, one of which is storytelling therapy as a non-pharmacological intervention, with the aim of explaining the application of storytelling therapy in reducing hospitalization anxiety in preschool-aged children.

Method: This study used a descriptive case study design conducted in the inpatient ward of a hospital in Central Jakarta on two preschool-aged children experiencing hospitalization anxiety, with a purposive sampling technique. The intervention was storytelling therapy for 10–15 minutes, performed once a day for three consecutive days with different stories. Anxiety levels were measured using a faces scale instrument five minutes before and after the intervention, and data were analyzed descriptively. **Result:** The results showed a gradual decrease in anxiety levels in both children up to the third day, accompanied by increased eye contact, more cooperative behavior, and reduced restless responses. **Conclusion:** Storytelling therapy is effective in reducing hospitalization anxiety in preschool-aged children and can be applied as an atraumatic care nursing intervention to improve children's comfort and cooperation during treatment.

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Introduction

Preschool-aged children (3–6 years old) are in an important developmental stage, characterized by increasing independence and becoming familiar with their surroundings. However, when undergoing hospitalization, children often experience anxiety due to separation from a familiar environment, exposure to frightening medical procedures, and interaction with unfamiliar people. This condition can disrupt the child's comfort during treatment and affect the healing process as well as their emotional development (Wiratama et al., 2025).

Hospitalization is an experience that has the potential to cause stress and psychological trauma, especially in preschool-aged children. The anxiety that arises not only affects the psychological condition but can also influence compliance with nursing interventions and the healing process (Ginting & Sembiring, 2024). Children who experience anxiety during hospitalization may show symptoms such as crying, excessive dependence on parents (clinginess), behavioral regression, irritability, sleep disturbances, changes in appetite, and physical complaints due to stress. Children also tend to avoid medical procedures and have difficulty concentrating during treatment (Bhandari et al., 2025).

World Health Organization (WHO) data in 2023 shows that approximately 45% of pediatric patients hospitalized are of preschool age. In addition, it was found that 4%–12% of children in the United States, 3%–6% of children in Germany, and 4%–10% of children in Canada and New Zealand also experience signs of stress and anxiety during treatment (WHO, 2023). Research by Okie Pujianti et al. (2025) also showed that hospitalization causes anxiety in preschool children, with mild anxiety at 38.4%, moderate at 30.7%, and severe at 27.6%. Higher anxiety was found in younger children, namely 3–4 years old.

Anxiety that is not properly managed can prolong the healing time, increase pain perception, and potentially cause long-term psychological impacts. This shows that hospitalization not only has a physical impact but also requires attention to the psychological aspects of the child (Bhandari et al., 2025). The limited cognitive ability of preschool children to understand the reasons and procedures of treatment is one of the main factors in the emergence of anxiety (Ginting & Sembiring, 2024).

Efforts to manage children's anxiety during hospitalization can be carried out through an atraumatic care approach, namely nursing interventions that aim to minimize stress and anxiety by facilitating play activities according to the child's developmental stage. Play is an important aspect of life and is one of the most effective ways to help children express feelings and develop coping mechanisms against stressful experiences (Hockenberry, 2023). One form of play-based atraumatic care intervention is storytelling therapy, which utilizes stories as a medium to help children express feelings in a safer and more enjoyable way. In the context of health services, storytelling is used as a narrative approach to convey meaning, experiences, and health education in a simple way so that it is easily accepted by children (Getchell, 2023). Several studies show that play therapy is effective in reducing anxiety, pain, and physiological stress, as well as accelerating the child's recovery process (Signorelli et al., 2023).

Based on observation results, it was found that five children experienced anxiety during hospitalization. Two children showed more cooperative behavior, while three children showed behaviors of crying, refusing interventions, being less cooperative, and avoiding eye contact with nurses. This condition is influenced by fear of the

hospital environment, medical procedures, and separation from a familiar environment. Therefore, the application of atraumatic care interventions through storytelling therapy is needed to help children channel their emotions, reduce anxiety, and increase their sense of security during treatment.

Objective

This case study aims to describe the application of storytelling intervention in reducing anxiety in preschool children.

Method

This case study was conducted in the pediatric ward of a hospital in Central Jakarta. The case focused on two children to see whether there were differences when given storytelling intervention. The two children were selected based on: (1) preschool age (3–6 years), (2) children currently in day 1–3 of treatment, (3) children showing anxious behavior, (4) children who were cooperative and stable.

In this case study, data collection used several tools, namely nursing assessment sheets, the Facial Image Scale anxiety assessment sheet developed by Buchanan, H & Niven in 2022. This instrument consists of five facial images arranged sequentially from happy to unhappy expressions. The child is asked to point to the face that best describes their feelings. Furthermore, a vital signs examination tool was used. In addition, supporting media such as storybooks, dolls, and needles without syringes were used as media to support the intervention. Supporting data were obtained from the patient's medical records. Data collection was carried out through a case study approach with methods of interview, observation, and direct physical examination of the patient. Assessment was carried out before the intervention and during implementation to observe and evaluate the patient's response to the therapy given.

Nursing intervention was focused on managing hospitalization anxiety through non-pharmacological intervention by applying storytelling therapy. Storytelling therapy was carried out by reading stories appropriate to the child's age to help divert attention, reduce anxiety, and increase the sense of security while in the hospital environment. The stories delivered were stories themed around the hospital and medical procedures with the aim of introducing the hospital environment so that children could become familiar with the environment and reduce hospitalization anxiety. Before carrying out the intervention, the nurse first measured the child's anxiety level using the Facial Image Scale instrument five minutes before the implementation of storytelling intervention, which lasted for 10–15 minutes, with the duration adjusted to the child's condition and response. During the storytelling session, the nurse observed the child's responses, both verbal and non-verbal, to assess the child's anxiety level and involvement in the activity. After the activity was finished, the nurse gave praise to the child. Five minutes after the intervention was given, the nurse again measured the child's anxiety level using the same instrument.

Results

Patient 1

Patient An. M was brought to the hospital by the family with a chief complaint of cough and shortness of breath. These complaints had been felt for several days before admission to the hospital and were felt to be increasingly severe. In addition, An. M's family reported that the child had a fever, accompanied by a general condition

that appeared weak and less active than usual. During treatment, the child showed behavioral changes in the form of becoming more quiet, reduced eye contact, and appearing afraid and refusing when nursing procedures were performed, which indicated anxiety toward the hospital environment.

Based on previous health history, An. M had undergone hospital treatment at the age of 1 year with a diagnosis of diarrhea. This hospitalization history was the second experience for the patient. There was no history of other chronic diseases reported by the family before the current treatment.

On physical examination, An. M was in a *compos mentis* condition and was able to respond to stimuli well, but appeared passive. The child appeared to be more silent, had reduced eye contact, and was less responsive to verbal interaction. When nursing procedures were performed, the child showed avoidant behavior, such as pulling and closing the hands, and appeared mildly restless. Vital signs showed a temperature of 36.8°C, pulse of 110–115 beats/minute, and respiratory rate of 38 breaths/minute.

In patient An. M, laboratory examination results showed hemoglobin levels below normal values, accompanied by a decreased platelet count, while leukocyte values were within normal limits. Supporting examination in the form of a chest X-ray showed a picture of right bronchopneumonia.

Before the intervention, an assessment was conducted on the child and parents. The initial assessment results showed patient 1 chose face number 4 on the Facial Image Scale instrument. Storytelling intervention was carried out in the child's room at 09:15 for 10 minutes with the cheerful title "Kiki the Rabbit and the Rainbow Hospital" using dolls and a needleless syringe as media. During the intervention, the child appeared silent but began to maintain eye contact, and the eye contact was already focused on the story being delivered. Five minutes after the intervention was completed, the re-evaluation results showed the patient chose face number 3, accompanied by an increase in cooperative attitude during the session.

On the second day, the initial assessment showed the patient again chose face number 3. Storytelling intervention was carried out at 08:30 for 15 minutes in the children's play area with the title "Bimo the Great Crab." During the session, the child appeared more cooperative, began to show verbal interaction, and maintained good eye contact. Evaluation five minutes after the intervention showed the patient still chose face number 3 and expressed dislike of the hospital environment.

On the third day, the initial assessment showed the patient chose face number 3 and stated that he was no longer afraid of being in the hospital. The intervention was carried out at 09:00 in the child's room for 15 minutes with the title "Pobi the Brave Bear at the Hospital." During the intervention, the child appeared enthusiastic, actively interacted, answered questions, and showed good eye contact. Evaluation five minutes after the intervention showed the patient chose face number 2, which indicated a decrease in anxiety.

Patient 2

In patient An. E, the initial complaint felt was a prolonged cough, accompanied by rapid breathing and a decline in general condition. The history of the illness being undergone required the child to undergo treatment at the hospital, which triggered a negative emotional response. During the early hospitalization, the patient appeared restless and showed refusal of medical procedures, such as covering the face when approached by the nurse and occasionally kicking the legs.

In patient An. E, the family stated that the child had a history of chronic disease in the form of pulmonary tuberculosis and was currently undergoing treatment in the third month. In addition, the patient had a history of repeated hospitalization since birth, with a fairly frequent frequency of visits to health facilities. This history of repeated medical treatment was part of the patient's previous experience in facing the hospital environment.

In patient An. E, the consciousness status was *compos mentis*, but the child appeared to refuse interaction at the beginning of the examination. Behaviors shown included covering the face and avoiding interaction, as well as refusal of medical procedures. Vital signs showed a temperature of 36.8°C, pulse of 119 beats/minute, and respiratory rate of 53 breaths/minute.

In An. E, laboratory examination also showed hemoglobin levels below normal values and a decrease in platelet count, with leukocyte values within the normal range. Radiological examination of the chest showed bilateral lung infiltrates, with a diagnosis of pulmonary tuberculosis. Overall, the laboratory and diagnostic examination results in both patients provided a picture of medical conditions that became stressors during treatment. This condition has the potential to affect the child's psychological response, including the emergence of anxiety during hospitalization, so a nursing approach is needed that focuses not only on the physical aspect but also on the psychological and emotional support of the patient.

TABLE 1. Pre- and Post-Intervention Anxiety Levels and Intervention Duration

Patient Initial	H1			H2			H3		
	"Kiki the Rabbit and the Rainbow Hospital"			"Bimo the Great Crab"			"Pobi the Brave Bear"		
	Anxiety Score			Anxiety Score			Anxiety Score		
	Pre	Storytelling Duration	Post	Pre	Storytelling Duration	Post	Pre	Storytelling Duration	Post
An. M	4	10 minutes	3	3	15 minutes	3	3	15 minutes	2
An. E	3	15 minutes	2	2	15 minutes	1	1	15 minutes	1

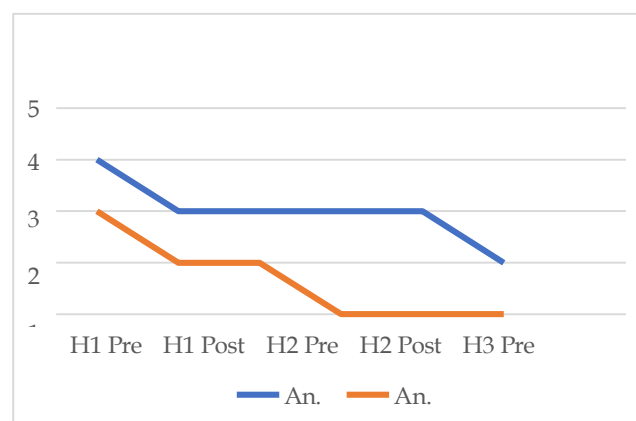


FIGURE 1. Graph of Children's Anxiety Levels During the Intervention

Discussion

Based on the analysis of the application of storytelling therapy in preschool-aged children experiencing anxiety during hospitalization in the Shafa 1 room of RSIJ Cempaka Putih, different manifestations of anxious behavior were found in each patient. In the first patient (An. M), the child showed withdrawn behavior such as silence, minimal eye contact, and avoidant reactions by pulling and closing the hands when an injection procedure was about to be performed, accompanied by a restless expression. Meanwhile, in the second patient (An. E), the child showed behavior of refusing to interact, covering the face, and excessive motor behavior such as kicking. These findings are in line with the study by Ginting & Sembiring (2024), which stated that preschool-aged children undergoing hospitalization show various signs of anxiety, such as refusal of treatment by covering the face and pulling away body parts.

According to Piaget's cognitive development theory, preschool-aged children are in the preoperational stage, characterized by egocentric thinking patterns and the ability to think symbolically. At this stage, children are not yet able to rationally understand the reasons behind the medical procedures they experience, so the hospitalization process is often perceived as a frightening experience. This condition can give rise to fear and refusal of the procedures given.

In addition to cognitive developmental factors, the unfamiliar hospital environment also acts as a source of stress for children. Exposure to the sounds of medical equipment, the distinctive smell of the hospital, and interaction with unfamiliar health workers can increase discomfort. Changes in daily routines during treatment also worsen the child's anxiety level. Children who are accustomed to certain activity patterns tend to be more prone to stress when these routines are disrupted. This is in line with the findings of Okie Pujianti et al. (2025), which stated that changes in routines during hospitalization can increase anxiety in children.

Hospitalization is a condition that has the potential to cause psychological stress in children. During the treatment period, children are asked to adapt to the illness they are experiencing, interaction with health workers, a hospital environment different from home, and the possibility of separation from family, especially parents. This separation can cause significant emotional changes due to feelings of loss, thereby triggering the emergence of anxiety in children (Handayani & Daulima, 2020). Children undergoing treatment in the hospital without parental accompaniment are reported to have up to three times the risk of experiencing high levels of anxiety. The absence of parents is a factor that strongly contributes to increased anxiety, which emphasizes the importance of parental support during the hospitalization process (Suraya et al., 2025).

Distraction is one method used to reduce stress and anxiety by diverting the individual's attention to something else, so that the focus on the anxiety experienced is reduced. Pleasant sensory stimuli can stimulate the release of endorphins, which play a role in inhibiting stimuli that trigger anxiety, so that the number of stimuli transmitted to the brain becomes lower (Mulyono et al., 2020).

In the context of children, storytelling can be utilized as a form of distraction to divert attention from the pain experienced. Through storytelling activities, nurses can also help change children's coping mechanisms from less adaptive to more adaptive, reduce stress levels due to hospitalization, and encourage children to be more accepting of the planned nursing procedures so that the healing process can proceed more optimally. In addition, storytelling provides various other benefits for children,

such as developing thinking and imagination skills, improving language skills, strengthening social skills, and becoming an effective means of communication between children and parents (Rianthi et al., 2022).

Storytelling has distinctive advantages compared to other intervention methods. This method is naturally favored by preschool children who enjoy listening to stories, and is very suitable for children with limited energy to engage in active play. Storytelling intervention also builds a familiar and supportive atmosphere between the child and the storyteller, thereby helping to reduce anxiety and facilitating emotional expression. The use of media such as hand puppets or replicas of hospital equipment can enrich this process by stimulating imagination and increasing children's involvement (Firdaus Panghegar et al., 2025).

The application of storytelling therapy in preschool-aged children was carried out through storytelling activities presenting various stories adjusted to the child's condition and needs. Storytelling therapy serves as an effective communication tool in helping reduce anxiety and increase the child's sense of security. After the intervention was carried out, both children showed changes in behavioral responses in the form of increased calmness and focused attention on the story. This finding is consistent with the study by Puspita Sari et al. (2021), which reported that storytelling therapy with puppet media can increase the sense of comfort and security in children, thereby encouraging a more cooperative attitude during treatment.

In this case, storytelling therapy showed a contribution in reducing hospitalization anxiety in preschool children, as seen from the results of anxiety level measurement using the Facial Image Scale (FIS) instrument (Figure 3.1). These results are in line with the study by Setia Sari & Salsabila (2025), in which children given storytelling intervention showed a significant difference in anxiety levels before and after the intervention. Consistent with the study by Abdi et al. (2025), children given storytelling intervention showed a significant decrease in anxiety compared to the group not given the intervention.

In this finding, a faster decrease in anxiety level occurred in the second child (An. E) compared to the first child (An. M). This result is thought to be related to differences in previous hospitalization history. Children with more frequent treatment experience tend to have better adaptation abilities to the hospital environment. This finding is in line with the study by Okie Pujianti et al. (2025), which stated that previous hospitalization experience plays a role in reducing anxiety responses in children.

The implementation of storytelling therapy in this case was carried out for 10–15 minutes per session and was conducted for three consecutive days. Anxiety level measurement used the Facial Image Scale (FIS), measured five minutes before and after the intervention. The pattern of anxiety reduction found in this case is in line with the study conducted by Jumrotun Ni'mah et al. (2024), which reported a significant decrease in children's anxiety levels after giving storytelling therapy with the same duration.

In the implementation of storytelling therapy, there were several limitations, including the child's condition sometimes falling asleep during the intervention schedule and fluctuations in the child's participation due to physical condition and mood. These limitations were overcome by adjusting the implementation time, creating a comfortable atmosphere, and using interesting story media. Despite the limitations, the intervention still showed benefits in helping reduce hospitalization anxiety in preschool-aged children. As care providers, nurses must have a traumatic

care skills for preschool children so that children can have a pleasant hospitalization experience and support a faster and more comprehensive recovery process.

Conclusion

Storytelling therapy is effective in reducing hospitalization anxiety in preschool-aged children and can be applied as an atraumatic care nursing intervention to improve children's comfort and cooperation during treatment

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