

Original Research

Playing with Pop-up Books to Reduce Preschool Children's Anxiety

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ABSTRACT

Background: Acute typhoid fever is an acute infectious systemic disease caused by the microorganism *Salmonella enterica* serotype Typhi, commonly known as *Salmonella typhi*. One of the issues that arises is anxiety due to hospitalization. The implementation of distraction techniques can help reduce anxiety caused by hospitalization.

Methods: This research design uses a descriptive method in the form of a case study. The approach includes Nursing Care, planning, implementation, evaluation, and nursing documentation. The research subjects consist of two individuals with the same issue, namely typhoid fever patients. This study was conducted at Siti Fatimah Hospital in South Sumatra from April 8 to 13, 2024.

Results: The study found that the distraction technique performed over three consecutive days resulted in a decrease in anxiety levels.

Conclusion: The research findings highlight the need for distraction technique interventions to address anxiety.

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INTRODUCTION

Typhoid fever is common in several countries worldwide, especially in those with low health standards. According to WHO, typhoid fever in children globally accounts for 11-20 million cases per year, resulting in a high mortality rate of 120,000-161,000 deaths annually (WHO, 2019). Typhoid fever is a dangerous disease that can be life-threatening. Without proper treatment, typhoid fever can have a poor outcome in 10-30% of cases, but this can decrease to 1-4% with appropriate therapy. Children are at the highest risk, with common symptoms including fever, chills, and abdominal pain.

Typhoid fever occurs worldwide, with high prevalence in developing countries, particularly in tropical regions. Most cases are reported in Southeast Asia, South Asia, and Sub-Saharan Africa. In Indonesia, typhoid fever is endemic and commonly found in major cities. The incidence of typhoid fever in Indonesia ranges from 350 to 810 per 100,000 population. The prevalence of this disease in Indonesia is 1.6%, making it the 5th most common infectious disease across all age groups, accounting for 6.0%. It also ranks 15th as a cause of death across all ages in Indonesia, contributing 1.6% to overall

mortality. Most cases of typhoid fever occur in individuals aged 3–19 years (Ministry of Health, Republic of Indonesia, 2020).

According to the Basic Health Research (Riskesdas, 2018), the prevalence of typhoid fever in Indonesia reached 1.7%. The highest prevalence was observed in the 5–14 years age group (1.9%), followed by the 1–4 years age group (1.6%), the 15–24 years age group (1.5%), and those under 1 year of age (0.8%). This condition indicates that children (0–19 years) constitute the largest population of typhoid fever cases in Indonesia.

According to data from the South Sumatra Provincial Health Office in 2021, the incidence of typhoid fever has increased over the past three years, with 12,354 cases reported in 2019, 18,431 cases in 2020, and 18,694 cases in 2021. Based on the 2021 report from the Palembang City Health Office, there were 168 cases of typhoid fever, including 30 cases in children aged 1–4 years, 78 cases in those aged 5–14 years, and 60 cases in individuals aged 15–44 years (South Sumatra Provincial Health Office, 2021).

The World Health Organization (WHO) reports that 3% to 10% of pediatric patients in the United States, around 3% to 7% of preschool children in Germany, and 5% to 10% of children in Canada and New Zealand exhibit signs of anxiety during hospitalization (Mulhayati et al., 2022). In Indonesia, the hospitalization rate for preschool children is 72% of the total population, with an estimated 35% of children undergoing hospitalization and 45% of them experiencing anxiety (Ministry of Health, RI, 2020).

According to data from the Ministry of Health of the Republic of Indonesia in 2022, the morbidity rate for children aged 0–2 years was 15.14%, 25.8% for children aged 3–5 years, and 13.91% for children aged 6–12 years. The highest morbidity rate was 25.8% for preschool-aged children (Ministry of Health, RI, 2022). Preschool children perceive illness as something frightening, so medical procedures and treatments can cause mental health issues for them (Jupyantari et al., 2023).

Separation anxiety is a common form of anxiety, especially during hospitalization. Therefore, play therapy is more effective in addressing children's anxiety (Habibi, 2022). Play therapy has been proven to have high therapeutic value for sick children, helping to reduce negative feelings. It is also used during preoperative preparations and invasive procedures (Periyadi et al., 2022).

According to a study at PKU Muhammadiyah Yogyakarta Hospital on the effect of pop-up book play therapy on anxiety in school-age children, preoperative anxiety using general anesthesia before being given a pop-up book toy showed that most children exhibited moderate anxiety symptoms, with 13 children (65%) experiencing moderate anxiety. There were no cases of severe anxiety, and the least common was mild anxiety, affecting 1 child (5%). After being given the pop-up book toy, preoperative anxiety using general anesthesia showed that most children exhibited moderate anxiety symptoms, with 10 children (50%) experiencing moderate anxiety. There was a decrease in severe anxiety and an increase in mild anxiety, with 9 children (45%) showing mild anxiety symptoms (Handayani et al., 2020). Based on the background described above, the author is interested in selecting the title: "Implementation of Nursing Care Using Distraction Techniques Through Pop-Up Book Reading to Reduce Anxiety in Children with Typhoid Fever Undergoing Hospitalization at Siti Fatimah Regional Hospital in 2024."

MATERIALS AND METHOD

The design of this research uses a descriptive method with a case study approach. This type of research is an observational case study in which the researcher participates by applying distraction techniques using pop-up books in providing nursing care to two

patients. The sample consisted of two children aged >3 years and <7 years suffering from typhoid fever with anxiety issues at Siti Fatimah Regional Hospital, South Sumatra.

The instruments or tools for data collection in this case study include informed consent, Standard Operating Procedures (SOPs), and interview forms for assessing pediatric nursing care in accordance with applicable regulations. Anxiety levels were measured using the SLKI (Indonesian Nursing Outcome Standards). Data were collected through interviews and observations. The results of the data collection are presented in the form of nursing care documentation, which includes assessment, nursing diagnoses, interventions, implementation, and evaluation.

RESULTS

After conducting field research, two patients were identified based on the assessments carried out. Patient 1, An.G, is 3 years old, and Patient 2, An.N, is 5 years old. Both patients showed signs and symptoms of anxiety, with the anxiety level of Patient 1 being moderate, and Patient 2 also moderate. The assessment was conducted through a history review using interviews and a head-to-toe physical examination, resulting in the following nursing data:

Patient 1: During admission, the patient's mother reported that the child had been experiencing fever for 5 days before hospitalization. The fever fluctuated, and the patient felt weak. Appetite had decreased. Based on the medical diagnosis, the patient was diagnosed with typhoid fever. Patient 2: During admission, the patient's mother reported that the fever had lasted for approximately one week, fluctuating, accompanied by reddish rashes all over the body starting from the abdomen, and left abdominal pain.

The primary nursing diagnosis for Patient 1 and Patient 2 is Anxiety related to situational crisis, as evidenced by the child appearing restless, tense, having difficulty sleeping, feeling confused, worried about the consequences of their condition, and having trouble concentrating. According to the SIKI DPP PPNI Task Force Team (2017), nursing interventions for patients with typhoid fever experiencing anxiety include anxiety reduction measures consisting of observation, therapeutic actions, education, and collaboration. Observation: Identify the level of anxiety (using the SLKI checklist). Therapeutic actions: Build trust and encourage family members to remain with the patient. Education: Conduct activities to redirect focus, such as using hand puppets. These nursing interventions are carried out based on the patient's needs and the expected outcomes.

The researcher assessed anxiety levels using the SLKI checklist. On the first day, both Patient 1 and Patient 2 were found to have moderate anxiety levels. On the second day, after implementation, the anxiety levels in both patients showed a significant decrease. By the third day, the anxiety levels in Patient 1 and Patient 2 had further decreased.

Table 1. Evaluation of Anxiety Levels After Three Sessions of Implementation

Day	Patient I	Patient II
Day 1	Moderate	Moderate
Day 2	Slightly Decreased	Slightly Decreased
Day 3	Decreased	Decreased

After three days of implementation, the anxiety levels of both patients improved. **Patient 1:** Before the implementation of the distraction technique using pop-up books, the anxiety level was moderate. After three days of implementing the distraction technique with pop-up books, the anxiety level decreased. **Patient 2:** Similarly, before the implementation of the distraction technique using pop-up books, the anxiety level was moderate. After three days of implementing the distraction technique with pop-up books, the anxiety level decreased.

DISCUSSION

According to the SDKI DPP PPNI Task Force Team (2018), the signs and symptoms of anxiety include subjective and major objective data. Major subjective symptoms: Feeling confused, worrying about the consequences of the condition, and difficulty concentrating. Major objective symptoms: Appearing restless, tense, and having difficulty sleeping. According to Nuliana (2022), anxiety is the most common psychological disorder observed in most hospitalized children, including preschool-aged children. Anxiety caused by hospitalization that is not addressed in children of this age can have negative impacts, such as fear, discomfort, lack of participation in care, prolonged treatment, and resulting poor psychological and physiological conditions. One of the recommended interventions to address anxiety in children is play therapy.

During the assessment, the researcher evaluated subjective and objective data presented by the patients. The researcher used the Indonesian Nursing Outcome Standards (SLKI) to determine the anxiety levels of Patient 1 and Patient 2 prior to implementation. The results indicated the following anxiety levels: Moderate confusion (verbalized), Moderate worry about the condition (verbalized), Moderate restlessness (behavioral), Moderate tension (behavioral), Moderate concentration difficulties, Moderate sleep pattern issues. Subsequently, the researcher proceeded with the intervention after determining the anxiety levels on the first day: moderate anxiety for both Patient 1 and Patient 2.

For Patient 1 (An.G):Day 1: Before implementation, the anxiety level was identified as moderate anxiety. After implementation, the anxiety level remained moderate anxiety.Day 2:Before implementation, the anxiety level was moderate anxiety. After implementation, the anxiety level improved to slightly decreased anxiety. Day 3: Before implementation, the anxiety level was slightly decreased anxiety. After implementation, the anxiety level further improved to decreased anxiety. Following the implementation, no behaviors indicative of anxiety were observed by 1:35 PM (WIB).

For Patient 2: Day 1: Before implementation, the anxiety level was identified as moderate anxiety. After implementation, the anxiety level remained moderate anxiety. Day 2: Before implementation, the anxiety level was moderate anxiety. After implementation, the anxiety level improved to slightly decreased anxiety. Day 3: Before implementation, the anxiety level was slightly decreased anxiety. After implementation, the anxiety level further improved to decreased anxiety. Following the implementation, no behaviors indicative of anxiety were observed by 1:25 PM (WIB).

Based on the nursing implementation conducted for An.G (Patient 1) and An.N (Patient 2), who were diagnosed with Typhoid Fever and anxiety issues at RSUD Siti Fatimah, South Sumatra, the following results were obtained:The implementation of pop-up book play therapy for both patients with typhoid fever and anxiety was carried out through observation, therapeutic actions, and education. Identifying potential causes of anxiety in both patients revealed that hospitalization was the common cause for An.G

(Patient 1) and An.N (Patient 2). Monitoring anxiety levels helped in assessing the patients' anxiety to better control it. Over the course of three days, the implementation of pop-up book play therapy showed a reduction in anxiety levels: An.G (Patient 1): Anxiety decreased from moderate anxiety to reduced anxiety. An.N (Patient 2): Anxiety also decreased from moderate anxiety to reduced anxiety.

The results of the analysis of the nursing implementation using pop-up book play therapy suggest that the activity conducted over three days demonstrated its effectiveness in reducing anxiety levels in patients with typhoid fever and anxiety issues. According to research by Saifudin et al. (2022): Parents are able to accept the situation of hospitalization. Parents can help their children adapt to the hospitalization experience. Parents assist their children in managing their emotions, cooperate with nurses, provide.

CONCLUSION

After implementing nursing interventions for Case 1 and Case 2, involving patients with Typhoid Fever accompanied by anxiety due to hospitalization for three days—namely, An. G from April 8 to April 10, 2023, and An. N from April 11 to April 13, 2024, in the Cemara Pediatric Inpatient Ward at Siti Fatimah Hospital, Palembang—the researcher concluded that: There is a significant difference in anxiety levels before and after the application of the Pop-Up Book Play Distraction Technique. Patient 1 (An. G), who initially exhibited a moderate level of anxiety on the first day before therapeutic implementation, experienced a reduction in anxiety to a lower level by the third day. Similarly, Patient 2 (An. N), who also had a moderate level of anxiety on the first day, showed a decrease in anxiety to a lower level by the third day after the intervention. Therefore, it can be concluded that the Pop-Up Book Play Distraction Technique is proven effective in reducing anxiety levels caused by hospitalization.

For Patients/Families It is hoped that patients and their families can apply distraction activities using Pop-Up Book media to reduce anxiety issues in children during hospitalization. This can also provide valuable experience for both patients and families regarding the nursing implementation to lower anxiety levels using Pop-Up Book media. For the Advancement of Nursing Science and Technology This study is expected to serve as a reference for hospitals in establishing standard operating procedures for reducing anxiety levels using Pop-Up Book media. For Hospitals This study is anticipated to be a reference for healthcare workers, particularly in the pediatric inpatient ward of Siti Fatimah Regional Hospital, South Sumatra Province, in implementing nursing practices to reduce anxiety levels using Pop-Up Book media.

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