

## Original Research/Systematic Review

**Snake and Ladder Game Intervention to Reduce Anxiety in Hospitalized Children****Marsella Putri Sulung**

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**ABSTRACT**

**Background :** Typhoid fever is a disease that affects the digestive tract, leading to an infection of the small intestine caused by the *Salmonella typhi* bacteria. Typhoid treatment often requires hospitalization, which, in addition to impacting the physical healing process, can also affect the psychological well-being of children, particularly in terms of anxiety. To reduce anxiety, snake and ladder game therapy can be utilized. This study aims to provide information about the anxiety experienced by preschool-aged children.

**Methods :** The research employs a descriptive case study approach. The subjects of the study consist of two children with similar criteria: pediatric typhoid fever patients experiencing anxiety issues. Data collection techniques include interviews, observations, and completing case study instruments over a period of three days in the treatment room.

**Result :** This study shows that play therapy reduces anxiety in pediatric patients with typhoid fever. The intervention using the snake and ladder game successfully decreased anxiety levels over three days.

**Conclusion :** Snake-and-ladder game therapy effectively reduced anxiety levels in typhoid fever patients, showing significant improvement from moderate to mild anxiety after three days.

**ARTICLE HISTORY**

Received :3-9-2024

Accepted:31-10-2024

**KEYWORDS**

Anxiety; Typhoid Fever; Snake and Ladder Game Therapy.

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Cite this as: Putri Sulung, Marsella. (2024). Snake and Ladder Game Intervention to Reduce Anxiety in Hospitalized Children. (*JKG*) *Jurnal Keperawatan Global*, 5(1), 1–5.

<https://doi.org/10.70920/jahns.v1i1.158>

**INTRODUCTION**

Typhoid treatment often requires hospitalization, which not only affects the physical healing process but also impacts the psychological well-being of children, particularly in terms of anxiety. Anxiety is a common feeling experienced by hospitalized patients, including crying and fear of strangers. Children face numerous stressors during hospitalization, which can negatively affect their development, as the hospital environment tends to induce stress and anxiety (Nurbaity & Sensussiana, 2021).

According to data from the World Health Organization (WHO), it is estimated that 11-20 million people fall ill due to typhoid, and approximately 128,000 to 161,000 people die from it each year. The 2019 Basic Health Research (Riskesdas) report from South Sumatra Province indicated that the prevalence of typhoid fever was 0.86%. Hospitalization can also cause anxiety as it separates patients from their loved ones, particularly

Famili and social friends (Colin et al., 2023).

Anxiety commonly manifests as crying and fear of unfamiliar individuals. The numerous stressors experienced by children during hospitalization can negatively affect their development (Safitri, 2022). In preschool-aged children, particularly those between 3 and 6 years old, reactions to hospitalization often include refusal to eat, frequent questioning, slow crying, and a lack of cooperation with healthcare workers. Play therapy can be applied to both healthy and ill children. Even when unwell, children still have a need to play. Through play, children can divert their attention from the hospitalization experience, helping them to relax and preventing immune decline that could lead to critical conditions.

One form of play therapy that helps mitigate the impact of hospitalization on children is the snake and ladder game. This game supports children's need to interact with peers, which is crucial for their development. It has been adapted to meet the needs of children in fostering a positive self-concept while being hospitalized. Additionally, the game can serve as a therapeutic method to reduce the stress experienced by children during their hospital stay (Siwi & Widyaningrum, 2019).

From the research conducted by Pratiwi (2021) in the Arya Wira Kencana Room at Balaraja General Hospital, it was found that nearly half of the 30 preschool-aged child patients who participated in snake and ladder play therapy were male (40.0%). The average anxiety level before therapy was 4.00, which decreased to an average of 2.00 after therapy. This indicates that snake and ladder play therapy has an impact on reducing anxiety among preschool-aged child patients in that ward.

## **MATERIALS AND METHOD**

This research employs a descriptive method. The population in this study consists of preschool-aged children hospitalized at Bhayangkara Hospital, Palembang. The criteria for this study are children aged 3-6 years, with a total of two respondents. The instrument used in this study is snake and ladder play therapy, while the children's anxiety levels were measured using a modified SLKI checklist.

## **RESULTS**

The Play Therapy activities were conducted over three days, from March 23–25, 2023, for Patient 1 and from March 26–28, 2023, for Patient 2, in the pediatric ward (Ruang Irna Anak). The assessment was carried out through history-taking using interviews and a head-to-toe physical examination, obtaining the following nursing data: Case 1 (F) : The patient's mother stated that her child had a high fever for the past three days, accompanied by coughing, nausea, and vomiting. During the assessment, An. F's body temperature was 38°C. The patient appeared restless and was difficult to engage in conversation (impaired concentration). The mother also mentioned that the child frequently whined and often woke up at night. Case 2 (G):The patient's mother stated that her child had a high fever for the past five days, with fluctuating fever, headaches, nausea, vomiting, and coughing. During the assessment, G's body temperature was 38°C, and the mucous membranes of the lips were dry. The patient appeared weak, restless, and showed slight difficulty concentrating.

The primary diagnosis for Patient 1 (F) and Patient 2 (G) is Anxiety related to situational crisis, evidenced by the children appearing restless, tense, having difficulty sleeping, feeling confused, worrying about the consequences of their condition, and having trouble concentrating. Nursing interventions for typhoid fever patients with anxiety due to hospitalization focus on Anxiety Reduction, which includes observation, therapeutic, educational, and collaborative approaches. Observation: Identifying the level of anxiety using the SLKI checklist. Therapeutic: Creating a therapeutic environment to build trust and encouraging the family to stay with the patient.

Educational: Conducting distraction activities through snake and ladder game therapy. The anxiety reduction interventions are tailored to the patient's needs and expected to achieve the desired outcomes.

The researcher assessed the patients' anxiety levels using the SLKI checklist. The results of the nursing interventions identified anxiety levels with the SLKI checklist. For Patient 1 (F), the anxiety condition on the first day was Moderate, and for Patient 2 (G), the anxiety condition was also Moderate. On the second day, after implementing the intervention, anxiety levels were reassessed using the SLKI checklist. Patient 1 (F) showed a Slight Decrease in anxiety, as did Patient 2 (G). On the third day, Patient 1 (F)'s anxiety condition was observed to have Decreased, and Patient 2 (G) also exhibited a Decreased anxiety level.

**Table 1.** Evaluation of Anxiety Reduction in Patients 1 and 2

SLKI Checklist					
Patient 1			Patient 2		
Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
Score 47	Score 67	Score 86	Score 53	Score 71	Score 89
Moderate anxiety	Moderate anxiety	Mild anxiety	Moderate anxiety	Mild anxiety	Mild anxiety

After implementing nursing interventions over three days, the researcher concluded that the nursing issues were fully resolved. The final evaluation results are as follows: **Patient 1 (F):** There was a decrease in anxiety scores following the implementation of nursing interventions using snake and ladder game therapy over three consecutive days. On the first day, Patient 1's anxiety condition was **Moderate**. After the intervention on the second day, the anxiety condition improved to **Slightly Decreased**. By the third day, the anxiety condition further improved to **Decreased**.

**Patient 2 (G) :** A decrease in anxiety scores was observed after the implementation of nursing interventions using snake and ladder game therapy over three consecutive days. On the first day, Patient 2's anxiety condition was **Slightly Increased**. Following the intervention on the second day, the anxiety condition improved to **Moderate**. By the third day, the anxiety condition further improved to **Slightly Decreased**. The researcher assumes that Patient 1 (F), who initially experienced **Moderate Anxiety**, gradually transitioned to a **Decreased Anxiety** state. Similarly, Patient 2 (G), who initially experienced **Slightly Increased Anxiety**, gradually transitioned to a **Slightly Decreased Anxiety** state.

## DISCUSSION

On day 1 of assessment, Patient 1 ( F) was found to have a body temperature of 38°C. By the second day, when the implementation was about to take place, the child's body temperature had slightly decreased to 37°C. Patient 1 ( F) expressed anxiety about being in the hospital, did not want to be far from her mother, and frequently cried, asking to go home. An. F was afraid that the doctor or nurse might perform procedures such as injections. Objective data showed that the patient appeared restless, was difficult to engage in conversation, had poor eye contact, looked tense and fearful, and had trouble sleeping. The level of anxiety was assessed through observations made by the researcher and using the SLKI checklist. The researcher implemented a therapeutic intervention using the snake-and-ladders game to reduce anxiety in patients F and G for three consecutive days following the SOP and the Indonesian Nursing Intervention Standards (SIKI) guidelines. During the implementation of the snake-and-ladders game therapy, the anxiety level on the first day for Patient 1 (F) was measured at 47, indicating moderate anxiety, while for Patient 2, the anxiety level was measured at 53, also indicating moderate anxiety. On the third day, the results showed that Patient 1 had an anxiety level of 86, indicating mild anxiety, while Patient 2 had an anxiety level of 89, also indicating mild anxiety.

The snake-and-ladders game therapy is a traditional game typically played by children. The game involves two or more players rolling dice to move across a board with numbered squares containing various images. The board features illustrations of snakes and ladders. Landing on a ladder allows the player to climb up to a higher square, while landing on a snake requires the player to slide down to a lower square, following the snake's path. A player is declared the winner when they are the first to reach the finish line (Afandi, 2019). One way to minimize the impact of hospitalization on children is through play activities (Colin et al., 2020). This has been demonstrated by research conducted by Pratiwi (2021), which showed that preschool children's anxiety levels decreased after participating in snake-and-ladders game therapy.

## CONCLUSION

The snake-and-ladders game therapy administered to Patient I (F) resulted in a reduction of anxiety levels, from moderate anxiety on the first day to a noticeable decrease on the second day, and further reduced to mild anxiety on the third day. Similarly, for Patient II (G), anxiety levels showed a significant reduction from the first day to the second day and continued to decrease to mild anxiety on the third day. The results of the nursing implementation analysis for the snake-and-ladders game therapy led the researcher to conclude that this therapy is effective in reducing anxiety levels in children with typhoid fever, specifically for Patient 1 (F) and Patient 2 (G), addressing anxiety caused by hospitalization. Conclusion :Snake-and-ladder game therapy effectively reduced anxiety levels in typhoid fever patients, showing significant improvement from moderate to mild anxiety after three days.

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