

ARTICLE INFORMATION

Received: June, 18, 2026

Revised: July, 23, 2026

Available online: July, 30, 2026

at: <https://e-jurnal.ipphorr.com/index.php/mhc>

Storytelling intervention for reducing anxiety among hospitalized preschool children

Shifa Yulianti Qomara*, Endang Suartini

Poltekkes Kemenkes Banten

Corresponding author: *E-mail: shifayuliantiqomara@gmail.com

Abstract

Background: Hospitalization is a stressful experience for preschool children and frequently induces anxiety due to unfamiliar environments, medical procedures, and separation from parents, potentially affecting treatment cooperation and recovery.

Purpose: To examine changes in anxiety levels among hospitalized preschool children following a storytelling intervention.

Method: A quantitative study employing a pre-experimental one-group pretest–posttest design was conducted among 30 hospitalized preschool children recruited using total sampling. Participants received an individual 10-minute storytelling education session using an age-appropriate illustrated storybook. Anxiety levels were assessed before and after the intervention using a validated hospitalization anxiety questionnaire for preschool children. Data were analyzed using descriptive statistics and the Wilcoxon signed-rank test, with statistical significance set at $p < 0.05$.

Results: Anxiety scores were significantly lower after the storytelling intervention than before the intervention ($Z = -4.806$, $p < 0.001$). The proportion of children with severe anxiety decreased from 20.0% before the intervention to 0% after the intervention, while the proportion with mild anxiety increased from 20.0% to 66.7%.

Conclusion: Anxiety scores decreased significantly following the storytelling intervention among hospitalized preschool children. However, because this study used a one-group pretest–posttest design without a control group, the findings should be interpreted cautiously, and further controlled studies are needed to confirm the effectiveness of storytelling in reducing hospitalization-related anxiety.

Keywords: Anxiety; Hospitalization; Preschool children; Storytelling.

INTRODUCTION

Hospitalization is a potentially stressful experience for children, particularly those of preschool age, who are highly vulnerable to anxiety due to developmental limitations and unfamiliar healthcare environments. Separation from parents, exposure to invasive medical procedures, and changes in daily routines may trigger emotional distress, resulting in crying, fear, treatment refusal, and uncooperative behavior. These reactions may negatively affect children's psychological well-being, interfere with nursing care, and delay the recovery process during hospitalization (Hockenberry, Wilson, & Rodgers, 2021; Claridge &

Powell, 2023). Previous studies have demonstrated that hospitalization-related anxiety is common among preschool children and may persist throughout the hospital stay if not appropriately managed (Sekhavatpour, Khanjani, Reyhani, Ghaffari, & Dastoorpour, 2019; Ku, Chua, & Shorey, 2025). Therefore, reducing anxiety has become an important component of pediatric nursing care to improve children's comfort, cooperation during treatment, and overall hospitalization experience (Ali, Abolwafa, & Alsayed, 2023).

Various non-pharmacological interventions have been recommended to reduce anxiety in hospitalized children, including play therapy, distraction techniques, and therapeutic communication (Umrana, Masri, & Risnawati, 2024). Although these approaches have shown positive outcomes, their implementation in pediatric wards is often inconsistent and has not been fully integrated into routine nursing practice. Among these interventions, storytelling has emerged as a promising therapeutic approach because it provides age-appropriate education, stimulates imagination, facilitates emotional expression, and helps children better understand unfamiliar situations in a non-threatening manner (Alehamid, Zarea, Rostami, Ghanbari, & Tashakori, 2023; Abdi, Karamoozian, Lotfilou, Gholami, Shaterian, Niasar, & Jandaghian-Bidgoli, 2025).

Recent systematic reviews and randomized controlled trials have reported that storytelling can significantly reduce anxiety and fear among hospitalized children by improving emotional coping and promoting a sense of security during medical treatment (Suraya, Wisuda, Bin Sansuwito, Suzanna, Oxyandi, & Tirtayanti, 2025; Nurhalija, Adelia, & Febriyeni, 2025). Evidence regarding the implementation of structured storytelling education as a nursing intervention for hospitalized preschool children remains limited, particularly in Indonesia (Wahid, Mohamed, Abdelazem, Ahmed, & Elsaid, 2021). Most previous studies have focused on general play therapy or storytelling as a recreational activity rather than as a structured educational intervention integrated into nursing care (Jensen, Biesen, & Graham, 2017).

RESEARCH METHOD

A pre-experimental one-group pretest–posttest design. The study was conducted in the Anggrek Pediatric Ward of Dr. Adjidarmo Regional General Hospital, Rangkasbitung, from February to March 2026. A total of 30 hospitalized preschool children were recruited using a total sampling technique, whereby all eligible children admitted during the study period were included. The inclusion criteria were preschool children aged 3–6 years who were hospitalized, conscious, able to communicate, accompanied by a parent or legal guardian, and whose parents or legal guardians provided written

informed consent. Children with cognitive impairment, severe hearing or visual impairment, critical illness requiring intensive care, or receiving sedative medication were excluded from the study. The intervention consisted of an individual storytelling education session conducted by the researcher using an age-appropriate illustrated storybook for approximately 10 minutes. The intervention followed a standardized procedure consisting of an introduction, interactive storytelling, discussion of the story, and positive reinforcement. Parents or legal guardians remained with the child throughout the intervention to provide emotional support and maintain the child's comfort during hospitalization.

Anxiety was measured using a hospitalization anxiety questionnaire for preschool children, adapted to assess anxiety responses related to hospitalization. The instrument consisted of 10 observational items covering emotional and behavioural responses, including fear, crying, withdrawal, restlessness, refusal of procedures, and interaction with healthcare providers. Each item was scored on a three-point Likert scale (0 = never, 1 = sometimes, and 2 = often), yielding a total score ranging from 0 to 20, with higher scores indicating greater anxiety. Anxiety levels were classified as mild (0–6), moderate (7–13), and severe (14–20). Prior to data collection, the questionnaire demonstrated satisfactory psychometric properties, with item validity coefficients ranging from 0.42 to 0.81 and a Cronbach's alpha coefficient of 0.86, indicating good internal consistency. Anxiety assessments were performed immediately before the storytelling intervention (pretest) and immediately after completion of the intervention (posttest). Participant characteristics were summarized using descriptive statistics. The normality of anxiety scores was assessed using the Shapiro–Wilk test, which indicated that the data were not normally distributed ($p < 0.05$). Therefore, differences in anxiety scores before and after the intervention were analysed using the Wilcoxon signed-rank test, with statistical significance established at $p < 0.05$. Statistical analyses were performed using IBM SPSS Statistics version 26.0. This study was approved by the Health Research Ethics Committee of the Ministry of Health Polytechnic of Banten (Approval No. DP.03.04/F.XXII.25/00172/2026). Written informed consent was obtained from the children's parents or legal guardians before participation. All participant information was kept confidential, and anonymity was maintained throughout the study.

Shifa Yulianti Qomara*, Endang Suartini

Poltekkes Kemenkes Banten

Corresponding author: *E-mail: shifayuliantiqomara@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i4.3617>

RESEARCH RESULTS

Table 1. Distribution of Respondent (N= 30)

Variable	Results
Age (n/%) (Mean±SD)(Range)(Year)	(4.57±1.01)(3-6)
3-4	14/46.7
5-6	16/53.3
Gender (n/%)	
Male	17/56.7
Female	13/43.3
Anxiety Before Intervention (n/%)	
Mild	6/20.0
Moderate	18/60.0
Severe	6/20.0
Anxiety After Intervention (n/%)	
Mild	20/66.7
Moderate	10/33.3
Severe	0/0.0

Table 1 presents the demographic characteristics of the participants and the distribution of anxiety levels before and after the intervention. The mean age of the participants was 4.57 ± 1.01 years (range: 3–6 years). Most participants were aged 5–6 years (16/30, 53.3%), while 14 (46.7%) were aged 3–4 years. More than half of the participants were male (17/30, 56.7%), whereas 13 (43.3%) were female. Before the intervention, the majority of participants experienced moderate anxiety (18/30, 60.0%), followed by mild anxiety (6/30, 20.0%) and severe anxiety (6/30, 20.0%). Following the intervention, anxiety levels improved, with 20 participants (66.7%) experiencing mild anxiety, 10 participants (33.3%) experiencing moderate anxiety, and no participants (0.0%) remaining in the severe anxiety category.

Table 2. Pre- and Post-Intervention Anxiety Levels

Variable	Before (Mean±SD)	After (Mean±SD)	Z	P-Value
Anxiety Score	6.47±2.30	1.83±1.37	-4.806	<0.001

Table 2 shows the comparison of anxiety scores before and after the storytelling intervention. Anxiety scores decreased following the intervention. Statistical analysis using the Wilcoxon signed-rank test demonstrated a significant difference between pre- and post-intervention anxiety scores ($Z = -4.806$, $p < 0.001$). In addition, the distribution of anxiety categories shifted toward lower severity, with no participants remaining in the severe anxiety category

after the intervention.

DISCUSSION

The findings of this study support the hypothesis that structured storytelling education significantly reduced anxiety levels among hospitalized preschool children. The significant difference between pre- and post-intervention anxiety scores indicates that storytelling is an effective non-pharmacological

Shifa Yulianti Qomara*, Endang Suartini

Poltekkes Kemenkes Banten

Corresponding author: *E-mail: shifayuliantiqomara@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i4.3617>

intervention for helping preschool children adapt to the psychological stress associated with hospitalization and unfamiliar healthcare environments (Febrianti, 2024).

These findings are consistent with previous studies reporting that storytelling and play-based interventions effectively reduce anxiety by diverting children's attention from medical procedures, increasing their sense of security, and promoting emotional comfort during hospitalization (Vageriya, 2019; Dewi, Nurhaeni, & Hayati, 2019). Unlike many previous studies that incorporated multiple therapeutic media or structured play activities, the present study demonstrated that a brief storytelling education session delivered without specialized media was sufficient to produce a statistically significant reduction in anxiety (Valizadeh, Romouzi, Aghajari, & Jafarabadi, 2022).

The effectiveness of storytelling may be explained by the developmental characteristics of preschool children, who respond positively to verbal narratives, imagination, and symbolic learning (Yati, Wahyuni, & Islaeli, 2017). Storytelling enables children to understand unfamiliar situations in a developmentally appropriate manner, reducing perceptions of threat associated with hospitalization and medical procedures. Furthermore, active engagement during storytelling may enhance emotional regulation and coping abilities, allowing children to respond more positively to stressful situations (Srinatania, Hendra, Deskia, & Perdani, 2021; Sulistyaningsih, Nurrohmah, & Purnamawati, 2023).

The findings suggest that storytelling education can be integrated into routine pediatric nursing care as a simple, safe, and low-cost intervention for anxiety management among hospitalized preschool children. Nevertheless, this study has several limitations, including the absence of a control group, the relatively small sample size, and the single-center study setting, which may limit the generalizability of the findings. Future studies should employ randomized controlled designs with larger samples and investigate the effectiveness of different storytelling media, delivery methods, and intervention durations to strengthen the evidence supporting storytelling as a pediatric nursing intervention (Suryani & Bakri, 2021).

CONCLUSION

Structured storytelling education significantly reduced anxiety levels among hospitalized preschool children. A significant difference was observed between pre- and post-intervention anxiety scores, indicating that the study objective was achieved. These findings suggest that storytelling education is an effective non-pharmacological nursing intervention for managing anxiety in preschool children during hospitalization.

REFERENCES

- Abdi, F., Karamoozian, A., Lotfilou, M., Gholami, F., Shaterian, N., Niasar, A. A., & Jandaghian-Bidgoli, M. (2025). Effect of play therapy and storytelling on the anxiety level of hospitalized children: A randomized controlled trial. *BMC Complementary Medicine and Therapies*, 25(1), 23.
- Alehamid, Z., Zarea, K., Rostami, S., Ghanbari, S., & Tashakori, A. (2023). Comparing the effectiveness of therapeutic play and storytelling on preoperative anxiety in preschool-age children: A randomized controlled trial. *Journal of Psychiatric Nursing*, 14(2).
- Ali, H. M., Abolwafa, N. F., & Alsayed, F. E. K. (2023). Effect of video games compared to storytelling on preoperative anxiety and fear among children undergoing surgery. *International Egyptian Journal of Nursing Sciences and Research*, 4(1), 1–16.
- Claridge, A. M., & Powell, O. J. (2023). Children's experiences of stress and coping during hospitalization: A mixed-methods examination. *Journal of Child Health Care*, 27(4), 531–546.
- Dewi, M. M., Nurhaeni, N., & Hayati, H. (2021). The effect of storytelling on fear in school-age children during hospitalization. *La Pediatria Medica e Chirurgica*, 43(Suppl. 1).
- Febrianti, K. N. (2024). Storytelling dolls reduce children's anxiety during hospitalization. *Journal of Applied Holistic Nursing Science*, 1(1), 19–24.

Shifa Yulianti Qomara*, Endang Suartini

Poltekkes Kemenkes Banten

Corresponding author: *E-mail: shifayulianti@qomara@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i4.3617>

- Hockenberry, M. J., Wilson, D., & Rodgers, C. C. (2021). *Wong's essentials of pediatric nursing* (11th ed.). Elsevier.
- Jensen, S. A., Biesen, J. N., & Graham, E. R. (2017). A meta-analytic review of play therapy with emphasis on outcome measures. *Professional Psychology: Research and Practice*, 48(5), 390–400.
- Ku, S. H., Chua, J. S., & Shorey, S. (2025). Effect of storytelling on anxiety and fear in children during hospitalization: A systematic review and meta-analysis. *Journal of Pediatric Nursing*, 80, 41–48.
- Nurhalija, S., Adelia, G., & Febriyeni, C. (2025). Nursing care for preschool children with hospitalization anxiety through the application of storytelling in the Anggrek room of the Arifin Achmad Regional General Hospital in Riau Province. In *Proceeding of Payung Negeri International Health Conference* (Vol. 3, No. 1, pp. 346–349).
- Sekhvatpour, Z., Khanjani, N., Reyhani, T., Ghaffari, S., & Dastoorpoor, M. (2019). The effect of storytelling on anxiety and behavioral disorders in children undergoing surgery: A randomized controlled trial. *Pediatric Health, Medicine and Therapeutics*, 10, 61–68.
- Srinatania, D., Hendra, A., Deskia, K., & Perdani, A. L. (2021). Storytelling as a therapeutic intervention toward anxiety level: A literature review. *KnE Life Sciences*, 705–712.
- Sulistyaningsih, P., Nurrohmah, A., & Purnamawati, F. (2023). The application of playing therapy with video media on the anxiety of preschool-age children due to hospitalization in Regional Hospital Dr. Soeratno Gemolong. *Jurnal Kesehatan Komunitas Indonesia*, 3(2), 181–193.
- Suraya, C., Wisuda, A. C., Bin Sansuwito, T., Suzanna, S., Oxyandi, M., & Tirtayanti, S. (2025). Storytelling-based nursing communication for reducing anxiety in hospitalized preschool children: A comprehensive systematic review and meta-analysis. *Children's Health Care*, 1–23.
- Suryani, E., & Bakri, M. H. (2021). Story therapy on children's anxiety during hospitalization. *Jurnal Kesehatan Ibu dan Anak*, 15(1), 36–46.
- Umrana, S., Masri, H. A., & Risnawati, R. (2024). A study on the implementation of storytelling therapy on the level of hospitalization anxiety in preschool children in the emergency room of Kendari City Regional General Hospital. *Klasics*, 4(1), 11–16.
- Vageriya, V. (2019). Effect of psycho educational intervention on level of anxiety among hospitalized children: A systematic literature review. *Journal of Drug Delivery and Therapeutics*.
- Valizadeh, L., Romouzi, A., Aghajari, P., & Jafarabadi, M. A. (2022). The effects of storytelling on anxiety and sleep in hospitalized children with fracture: A randomized clinical trial. *Nursing and Midwifery Studies*, 11(2), 123–129.
- Wahid, A. H., Mohamed, M. F. M. H., Abdelazem, O. A. S., Ahmed, M. S. N., & Elsaid, F. Z. D. (2021). Effect of storytelling on preoperative anxiety and fear among children undergoing surgery. *Egyptian Journal of Health Care*, 12(1), 938–947.
- Yati, M., Wahyuni, S., & Islaeli, I. (2017). The effect of storytelling in play therapy on anxiety levels among preschool children during hospitalization at the General Hospital of Buton. *Public Health of Indonesia*, 3(3), 96–101.

Shifa Yulianti Qomara*, Endang Suartini

Poltekkes Kemenkes Banten

Corresponding author: *E-mail: shifayulianti@qomara@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i4.3617>