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ANXIETY LEVELS AMONG HOSPITALIZED PRESCHOOL CHILDREN

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ABSTRACT

Background: Hospitalization represents an inherently stressful crisis for preschool-aged children due to abrupt environmental displacement, invasive medical interventions, and separation from primary caregivers. In eastern Indonesia, empirical documentation detailing anxiety levels among hospitalized pediatric patients in acute wards remains exceptionally scarce.

Objectives: To describe the anxiety levels among preschool children hospitalized

Methods: This quantitative descriptive study employed a cross-sectional approach involving 60 preschool children (aged 3–6 years) admitted to the Nuri Ward of Bhayangkara Hospital Class II Jayapura, selected through consecutive sampling. Data were collected using the validated Preschool Anxiety Scale (PAS) completed by primary caregivers. Data analysis was performed univariately to determine frequency distributions and percentages.

Results: Of the 60 pediatric respondents, the majority experienced moderate anxiety ($n = 39$; 65.0%), while 15 children (25.0%) suffered mild anxiety, and 6 children (10.0%) exhibited severe anxiety. The most frequently observed behavioral manifestation was severe tension when interacting or playing with other children (40.0%), followed by fear of unfamiliar situations, distress when separated from home, and hypersensitivity to hospital sensory stimuli.

Conclusion: The majority of hospitalized preschool children experience moderate anxiety during acute inpatient care. Pediatric nursing practices must incorporate routine early psychological screening, developmentally appropriate non-pharmacological therapies (such as play and storytelling interventions), and active family-centered care models to mitigate hospitalization trauma

Keywords: anxiety, hospitalization, pediatric nursing, preschool children

INTRODUCTION

Hospitalization is universally recognized as a distressing and threatening psychological crisis for young pediatric patients (Abdi et al., 2024; Hockenberry & Wilson, 2021). When admitted to an acute inpatient ward, children are abruptly separated from familiar home routines and exposed to unfamiliar clinical surroundings, intimidating medical personnel, and painful or invasive diagnostic and therapeutic procedures (Díaz-Rodríguez et al., 2021; Yildirim et al., 2025). Young children, particularly those within the preschool developmental phase, lack mature cognitive and emotional

coping strategies to process acute hospital environments constructively (Erikson, 1950; Kesgin & Tok, 2023). Consequently, unmitigated pediatric hospitalization anxiety commonly manifests as marked emotional resistance, physical agitation, sleep and appetite disturbances, active procedure refusal, and prolonged hospitalization stays (Abdi et al., 2025; Benazeera & Aranha, 2025).

Epidemiological investigations confirm that anxiety disorders among hospitalized children constitute an urgent global pediatric healthcare priority. Worldwide data from the World Health Organization suggest that approximately 10% to 20% of young children suffer from emotional or anxiety disturbances, a proportion that escalates sharply to over 50% upon acute hospital admission (Ali, 2025; Kesgin & Tok, 2023; World Health Organization, 2024). In various developing nations, systematic evaluations consistently show that more than half of admitted pediatric patients experience moderate-to-severe anxiety during their hospital stay (Abdi et al., 2024; Ali, 2025). At Bhayangkara Hospital Class II Jayapura, pediatric admissions account for roughly 20% to 30% of total monthly inpatient visits, equating to approximately 66 to 126 hospitalized children each month. Preliminary ward observations in early 2026 revealed that 7 out of 10 preschool children exhibited severe distress, including uncontrollable crying, panic, and refusal to cooperate with attending nursing personnel.

The emergence and severity of anxiety during pediatric hospitalization are fundamentally driven by children's cognitive and psychosocial developmental stages (Erikson, 1950; Hockenberry & Wilson, 2021). Children aged 3 to 6 years reside in Piaget's preoperational cognitive stage and Erikson's stage of initiative versus guilt, in which causal reasoning remains incomplete and magical thinking dominates (Erikson, 1950; Kesgin & Tok, 2023). In this developmental bracket, young children frequently perceive clinical interventions, needle injections, and unfamiliar monitoring equipment as severe physical threats or punitive actions (Hockenberry & Wilson, 2021; Yildirim et al., 2025). In addition, sudden separation from primary attachment figures, disruption of daily play opportunities, and invasive sensory stimuli within the ward environment trigger intense separation and situational anxiety (Abdi et al., 2024; Suraya et al., 2025). Without structured psychological support, this distress hampers therapeutic rapport and impairs clinical outcomes (Benazeera & Aranha, 2025; Lanjekar & Kale, 2022).

To counteract the traumatic effects of pediatric hospitalization, current international evidence underscores early anxiety screening alongside developmentally tailored non-pharmacological modalities, such as therapeutic play, storytelling, and family-centered care models (Abdi et al., 2025; Godino-Iáñez et al., 2020; Shah & Kaur, 2022). Nevertheless, empirical assessments documenting pediatric anxiety within regional hospital settings across eastern Indonesia, specifically in Jayapura, Papua, remain virtually non-existent. Distinct socio-demographic realities, cultural kinship patterns, and regional clinical environments may uniquely shape children's behavioral responses and parental

coping mechanisms (Abdi et al., 2024; Nasela et al., 2025). To address this empirical void, this study evaluated the anxiety levels of preschool children hospitalized in the Nuri Ward of Bhayangkara Hospital Class II Jayapura, establishing vital baseline data to guide child-friendly, family-centered pediatric nursing protocols.

METHODS

Study Design and Participants

This study was an analytical descriptive investigation utilizing a cross-sectional design conducted in the Nuri Ward (Pediatric Inpatient Unit) of Bhayangkara Hospital Class II Jayapura. The study population encompassed all preschool-aged children admitted to the ward. A sample of 60 children was recruited using consecutive sampling based on explicit inclusion criteria: (1) aged 3–6 years; (2) actively undergoing treatment in the Nuri Ward; (3) accompanied by a biological parent or primary legal guardian throughout hospitalization; and (4) parent/guardian granting written informed consent. Children experiencing critical medical destabilization or severe congenital cognitive impairments were excluded. All research procedures conformed strictly to the ethical principles of the Declaration of Helsinki

Ethical approval statement

Administrative operational permission was likewise authorized by Bhayangkara Hospital Class II Jayapura (Approval No: 445/Bhay-Jpr/VI/2026).

Research Instruments

Data collection utilized two structured instruments: Demographic Intake Form: Documenting the child's age, gender, education status, primary diagnosis, hospital length of stay, history of prior hospitalization, primary caregiver identity, and caregiver's educational level. Preschool Anxiety Scale (PAS): A validated 28-item proxy-report tool completed by primary caregivers measuring manifestations across specific fears, generalized anxiety, social anxiety, and separation distress. Items are rated on a 5-point Likert scale (0 = Not at all true to 4 = Very true). In accordance with standardized scoring cut-offs, cumulative scores were classified into Mild Anxiety (<30), Moderate Anxiety (30–60), and Severe Anxiety (>60). The instrument demonstrated robust reliability with a Cronbach's alpha of 0.862 in this study cohort.

Data Analysis

Data were analyzed univariately using SPSS version 26.0. Categorical variables (demographic profiles, anxiety categories, and PAS indicator proportions) were expressed as absolute frequencies (\$n\$) and relative percentages (%).

RESULTS

Table 1. Distribution of Respondent Characteristics (n=60)

Characteristics	Frequency	Percentage (%)	Mean $\pm$ SD
Child's Age (Months)			55.20 $\pm$ 12.54
36	11	18.3	
48	16	26.7	
60	19	31.7	
72	14	23.3	
Child's Gender			
Male	32	53.3	
Female	28	46.7	
Education Level			
Not yet in school	21	35	
Early Childhood Education	15	25	
Kindergarten	24	40	
Prior Hospitalization Experience			
First time (No previous experience)	41	68.3	
Had previous hospitalization	19	31.7	
Length of Hospital Stay			
1–3 days	37	61.7	
>3 days	23	38.3	
Primary Caregiver Accompanying Child			
Mother	44	73.3	
Father	11	18.3	
Other Guardian	5	8.4	
Caregiver's Education Level			
Primary / Junior High School	8	13.3	
Senior High School	34	56.7	
Higher Education	18	30	

As presented in Table 1, the mean age of the hospitalized preschool children was 55.20 $\pm$ 12.54 months (4.60 $\pm$ 1.04 years), with the largest proportion aged 60 months / 5 years (31.7%), with a balanced gender distribution of 53.3% boys and 46.7% girls. The majority of children had no prior hospitalization experience (68.3%), were in their first 1–3 days of admission (61.7%), and were accompanied by their mothers as primary caregivers (73.3%).

Table 2. Distribution of Anxiety Levels among Preschool Children (n=60)

Anxiety Level	Frequency	Percentage (%)
Mild	15	25.0
Moderate	39	65.0
Severe	6	10.0

Most preschool children experienced moderate anxiety (65%), followed by mild anxiety (25%) and severe anxiety (10%). These findings indicate that hospitalization remains an experience that causes psychological distress in the majority of preschool children in the Nuri Ward.

DISCUSSION

The empirical results of this study demonstrated that 65.0% of preschool children hospitalized in the Nuri Ward of Bhayangkara Hospital Class II Jayapura suffered from moderate anxiety, 10.0% experienced severe anxiety, and only 25.0% exhibited mild anxiety. An evaluation of specific behavioral dimensions indicated that 40.0% of respondents frequently displayed pronounced tension when attempting to engage or play with other children in the ward. Furthermore, other prominent symptoms included acute fear of unfamiliar clinical situations, intense distress when separated from home, and hypersensitivity to auditory and visual hospital stimuli. Sociodemographic profiling also revealed that 68.3% of the cohort were experiencing their first hospitalization, and 61.7% were within their initial three days of ward admission.

These behavioral responses align with Erikson's psychosocial developmental theory and Wong's pediatric nursing framework regarding childhood stress reactions to illness and hospitalization (Erikson, 1950; Hockenberry & Wilson, 2021). Preschoolers lack the cognitive maturity required to process the necessity of painful medical interventions, frequently interpreting clinical procedures through magical thinking as bodily assault or punishment (Hockenberry & Wilson, 2021; Kesgin & Tok, 2023). These findings are consistent with recent international clinical investigations documenting elevated anxiety burdens across pediatric inpatient units globally (Abdi et al., 2024; Ali, 2025; Díaz-Rodríguez et al., 2021). In a multi-ward study, Abdi et al. (2024) confirmed that over 60% of admitted pediatric patients suffered substantial anxiety during initial hospital admission, driven largely by fear of the unknown and caregiver distress. The high prevalence of peer-interaction tension observed in this study corresponds with evidence reported by Benazeera and Aranha (2025) and Godino-Iáñez et al. (2020), who noted that unfamiliar clinical environments suppress children's intrinsic exploratory and play drives, inducing social withdrawal and hypervigilant defense reactions. In addition, several international clinical trials have shown that unmitigated sensory overstimulation and invasive clinical procedures exacerbate fear reactions among preschool-aged inpatients (Díaz-Rodríguez et al., 2021; Yildirim et al., 2025).

The high frequency of moderate-to-severe anxiety in this eastern Indonesian hospital cohort is compounded by the novelty of the inpatient setting (68.3% first-time admissions) and the acute disruption of familiar family structures. Because 73.3% of the children were accompanied primarily by their mothers, any parental apprehension inevitably transmits to the child via reciprocal psychological contagion (Abdi et al., 2024). These clinical findings indicate that pediatric inpatient nursing in regional hospitals must transition beyond traditional task-oriented care toward structured Family-Centered Care (FCC) paradigms. Nurses must actively involve mothers and caregivers in pre-procedure preparation and incorporate developmentally targeted non-pharmacological modalities—such as medical play therapy, expressive storytelling, origami, and child-friendly distraction

techniques—to desensitize children to medical equipment and alleviate hospitalization stress (Abdi et al., 2025; Lanjekar & Kale, 2022; Shah & Kaur, 2022; Yildirim et al., 2025).

This study possesses notable strengths, including providing initial empirical evidence regarding pediatric inpatient anxiety within Papua—an underrepresented geographical jurisdiction in the literature and utilizing the standardized Preschool Anxiety Scale (PAS). Nonetheless, several limitations should be considered. First, the cross-sectional descriptive design provides only a point-in-time snapshot without evaluating changes in anxiety trajectories across the full hospitalization trajectory. Second, reliance on parent-proxy reports may introduce subjective perception and reporting bias. Third, the sample was confined to 60 pediatric patients from a single medical center, limiting broad generalizability. Future studies should implement prospective multicenter cohort designs and randomized controlled trials evaluating the efficacy of specific play and storytelling interventions, supplemented by objective physiological biomarkers such as heart rate variability or salivary cortisol measurements

CONCLUSION

The majority of preschool children hospitalized in the Nuri Ward of Bhayangkara Hospital Class II Jayapura experience moderate anxiety, and severe anxiety. Hospitalization constitutes an acute psychological crisis that restricts normal play behavior and elicits distress in young children. Clinical pediatric nurses must institute early routine anxiety assessments, integrate parental involvement through Family-Centered Care, and implement structured play and storytelling interventions to promote psychological resilience and optimize recovery during inpatient hospitalization.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest with any party regarding the publication of this manuscript.

DECLARATION ON THE USE OF ARTIFICIAL INTELLIGENCE (AI)

The authors declare that no Generative AI or AI-assisted technologies were used to generate, calculate, or interpret the primary research data, clinical figures, or core conclusions of this study.

REFERENCES

- Abdi, F., Karamoozian, A., Lotfilou, M., Gholami, F., Shaterian, N., Abasi Niasar, A., Aghapour, E., & 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), Article 29. <https://doi.org/10.1186/s12906-025-04767-4>
- Abdi, F., Pakzad, R., Shaterian, N., Ashtari, M., Ashtari, S., Khoramabadi, Z. K., & Jandaghian-Bidgoli, M. (2024). Exploring and comparing the relationship between maternal anxiety and children's anxiety during admission, hospitalization, and discharge in pediatric wards of Iranian hospitals. *BMC Psychology*, 12(1), Article 532. <https://doi.org/10.1186/s40359-024-02154-1>
- Ali, S. S. (2025). Prevalence and interventions for anxiety and depression in children and adolescents. *International Journal of Contemporary Pediatrics*, 12(2), 245–252. <https://doi.org/10.18203/2349-3291.ijcp20253488>
- Benazeera, & Aranha, P. R. (2025). Nurse-led play intervention on hospitalization anxiety and fear among children admitted to a tertiary care hospital. *Journal of Education and Health Promotion*, 14, Article 317. https://doi.org/10.4103/jehp.jehp_1234_24
- Burnier, M., & Egan, B. M. (2019). Adherence in hypertension: A review of prevalence, risk factors, impact, and interventions. *Circulation Research*, 124(7), 1124–1140. <https://doi.org/10.1161/CIRCRESAHA.118.313220>
- Díaz-Rodríguez, M., Alcántara-Rubio, L., Aguilar-García, D., Pérez-Muñoz, C., Carretero-Bravo, J., & Puertas-Cristóbal, E. (2021). The effect of play on pain and anxiety in children in the field of nursing: A systematic review. *Journal of Pediatric Nursing*, 61, 15–22. <https://doi.org/10.1016/j.pedn.2021.02.022>
- Godino-Iáñez, M. J., Martos-Cabrera, M. B., Suleiman-Martos, N., Gómez-Urquiza, J. L., Vargas-Román, K., Membrive-Jiménez, M. J., & Albendín-García, L. (2020). Play therapy as an intervention in hospitalized children: A systematic review. *Healthcare*, 8(3), Article 239. <https://doi.org/10.3390/healthcare8030239>
- Hockenberry, M. J., & Wilson, D. (Eds.). (2021). *Wong's essentials of pediatric nursing* (11th ed.). Elsevier.
- Kesgin, M. T., & Tok, H. H. (2023). Anxiety in children and adolescents in the COVID-19 pandemic: A systematic review. *Current Approaches in Psychiatry*, 15(3), 441–452. <https://doi.org/10.18863/pgy.1139328>
- Lanjekar, H. K., & Kale, A. (2022). A study to assess the effectiveness of origami therapy on anxiety towards hospitalization among children admitted in pediatric wards. *Journal of Pharmaceutical Negative Results*, 13(8), 1169–1173. <https://doi.org/10.47750/pnr.2022.13.s08.145>
- Nasela, S. J., Yikwa, J. P., & Kogoya, M. (2025). Risk factors for hypertension and health behaviors in communities in Eastern Indonesia. *Papua Journal of Tropical Nursing*, 8(1), 12–20. <https://doi.org/10.31965/pjtn.v8i1.411>
- Shah, A. N., & Kaur, H. (2022). Assess the effectiveness of play activities to reduce the anxiety level of hospitalized children at the age group of 4–10 years. *PARIPEX Indian Journal of Research*, 11(6), 115–118. <https://doi.org/10.36106/paripex/8508468>
- Shahin, W., Kennedy, G. A., & Stupans, I. (2021). The association between social support and medication adherence in patients with hypertension: A systematic review. *Pharmacy Practice*, 19(2), Article 2300. <https://doi.org/10.18549/PharmPract.2021.2.2300>
- Suraya, C., Wisuda, A. C., Sansuwito, T. B., & Dioso, R. (2025). Determinants of anxiety in hospitalized preschool children. *Journal of Nursing Science Research*, 2(1), 45–54. <https://doi.org/10.33862/jnsr.v2i1.590>

- World Health Organization. (2024). Child and adolescent mental health. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
- Xiong, S., Busingye, D., Musinguzi, G., & Neupane, D. (2023). Family support and medication adherence among residents with hypertension in informal settlements of Nairobi, Kenya: A mixed-method study. *Journal of Human Hypertension*, 37(1), 74–79. <https://doi.org/10.1038/s41371-022-00657-z>
- Yildirim, M., Sevinç Akin, H. Y., & Akin, B. (2025). Effect of toys made from medical materials on anxiety among hospitalized children: A randomized controlled trial. *Journal of Pediatric Nursing*, 80, 112–119. <https://doi.org/10.1016/j.pedn.2024.4548>