

Section: Paediatric Nursing

Kinderflix therapy proven to alleviate anxiety in paediatric patients with acute gastroenteritis

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Abstract

Acute gastroenteritis (GEA) poses a significant global health challenge, contributing to a 9% morbidity and mortality rate among children under five. In Indonesia, GEA has the potential to trigger outbreaks and is particularly concerning for preschool children, whose weak immune systems make them highly susceptible to the disease and its complications, including hospitalization-related anxiety. This anxiety often leads to uncooperative behaviour, making treatment more difficult, especially for children facing hospitalization for the first time. Non-pharmacological interventions like distraction have emerged as effective ways to address this issue. This study explores the effectiveness of Kinderflix video therapy in alleviating anxiety among children with GEA at Kebumen Regional General Hospital. Using a qualitative descriptive approach and a case study design, we focused on two respondents aged 3-5 years with GEA and anxiety. Data was collected through interviews, observations, and documentation, employing the Spence Children's Anxiety Scale (SCAS) for Preschoolers. The findings revealed that on the first day, patient 1 exhibited moderate anxiety with an SCAS score of 36, which reduced to mild anxiety (score of 28) following the therapy. Similarly, patient 2's anxiety decreased from a moderate level (SCAS score of 32) to mild (score of 17) on the third day. Administering video therapy for 10 minutes twice daily proved effective in significantly reducing anxiety levels in young children suffering from GEA.

Keywords: Kinderflix; anxiety; gastrointestinal problems; paediatric nursing; prevention strategy

Introduction

Acute gastroenteritis is a significant global health issue, particularly in developing countries, where it contributes to high morbidity and mortality rates. Children with weak immune systems are especially vulnerable, as their bodies are more easily attacked by bacteria. This condition requires prompt treatment, as delays can lead to severe consequences, including organ failure and death (Sari & Sensussiana, 2022). According to data from the United Nations Children's Fund (UNICEF), acute gastroenteritis accounts for approximately 9% of all deaths among children under five years of age. This translates to over 1.300 young children dying every day, or around 484.000 deaths annually, despite the availability of healthcare services and simple treatment options (UNICEF, 2022). In Indonesia, acute gastroenteritis is recognised as a potential cause of outbreaks. In 2021, 23.8% of all toddlers in Indonesia were affected by diarrhea, a common symptom of gastroenteritis (Kementrian Kesehatan RI, 2021). In Central Java Province, the mortality rate for children under five reached 4.024 cases in 2022, an increase from 3.997 cases in 2021. Diarrhea remains a leading cause of infant mortality, accounting for 13% of all deaths in this age group. In Purworejo Regency, the prevalence of diarrhea in children also fluctuates annually, with 12.20% of toddlers experiencing diarrhea in 2021. This disease predominantly affects children, with 60-70% of cases caused by rotavirus infection, 12-20% With bacterial infections, and less than 10% With parasitic infections (Wahyuni, 2021). As Maharini (2020) explains, acute gastroenteritis is caused by microbial infections that lead to fluid malabsorption and intestinal hyperperistalsis. This impairs the absorption of food, water, and electrolytes, resulting in diarrhea. Symptoms include frequent defecation (more than three times a day), with stools ranging from mushy to liquid, nausea, vomiting, mild fever, loss of appetite, and abdominal discomfort (Purba, 2021).

Children with acute gastroenteritis often require hospitalisation, where they receive care from healthcare professionals skilled in managing the disease. However, hospitalisation can lead to psychological issues, including stress and anxiety (Padila, Agusramon, & Yera, 2019). The prevalence of anxiety in children varies by country, ranging from 3% to 10%. In one area of Central Java, it is estimated that 35 out of every 100 hospitalised children experience anxiety disorders, with 45% of them showing signs of anxiety (Rahmnia, Apriliyani, & Kurniawan, 2023). Anxiety in children with acute gastroenteritis can manifest as crying when approached by nurses, nausea, vomiting, throwing objects, or hitting those nearby. If not properly addressed, this anxiety can lead to long-term trauma, disrupt gross motor development, and hinder the child's recovery process (Apriani, 2022). Non-pharmacological interventions, such

as distraction techniques, can be highly effective in managing anxiety. Children are particularly susceptible to distraction, and audiovisual therapy can help release endorphins, which reduce stress and pain (Novitasari, Weti, Ferasinta, & Wati, 2021). Distraction therapy works by shifting the child's focus to something enjoyable, such as watching cartoons, television, or observing the scenery. One effective nursing intervention is the use of animated video learning media. These videos not only capture the child's attention but also influence their attitudes and behaviours (Tsamara, 2021). Watching animated videos is especially effective in reducing anxiety in children, as it provides enjoyment, fosters imagination, and offers education, all without interfering with the child's treatment and recovery (Fatmawati, 2019). A study supported that the effectiveness of audiovisual distraction therapy in the form of animated videos for reducing anxiety in children, making it a valuable tool in paediatric care (Novitasari, Weti, Ferasinta, & Wati, 2021). Therefore, the study purposed to evaluate the benefits of Kinderflix to reduce anxiety among children with gastrointestinal problems.

Case Description

Data collection was carried out through a case study in the Melati room of Dr. Soedirman Kebumen Regional General Hospital, located at Jl. Kebumen Raya No.232, Muktisari, Kebumen Sub-district, Kebumen District, Central Java. The study involved two respondents, both children aged 3 to 5 years, who were experiencing anxiety due to hospitalization (**Table 1**). Patient A, a 3-year-old boy, was admitted from Monday, January 8th to January 12th, 2024. Patient J, a 4-year-old girl, was admitted from Saturday, January 12th to January 16th, 2024. This case study aimed to identify and address the nursing problem of anxiety in preschool children during hospitalization by applying distraction techniques, specifically through watching Kinderflix videos. The intervention was conducted for 10 minutes twice daily. The tools used in this study included the SCAS (Spence Children's Anxiety Scale) for assessing anxiety levels and a smartphone for showing the videos. The therapy successfully distracted the children from their anxiety related to hospitalization. Both patients exhibited signs and symptoms of anxiety, such as fussiness, crying, an unwillingness to be left alone even for a minute, restlessness, fear upon seeing a nurse, refusal to take medication, and difficulty sleeping. Other observed behaviours included tense facial expressions, moving away from the nurse, seeking comfort from their mothers, appearing restless and pale, and avoiding eye contact. The study showed that both patients experienced anxiety throughout their hospitalization. Before the video therapy was introduced, an initial assessment of anxiety levels using the SCAS anxiety scale indicated that both patients were experiencing moderate anxiety, with Patient I scoring 36 and Patient II scoring 32. After three days of watching Kinderflix videos, both patients showed a reduction in their anxiety levels, moving from moderate to mild anxiety, although their scores differed (**Table 2**).

Table 1. Data related to clinical symptoms.

Patient information	Patient I	Patient II
Name	A	J
Place, Date of birth	Kebumen, 22 May 2020	Kebumen, 12 November 2019
Age	3 years 7 months	4 years 2 months
Gender	Male	Female
Address	Klegenrejo RT 003 / RW 002	Tlepok RT 002/RW 003
Date of admission	8 January 2024	12 January 2024
Date of assessment	8 January 2024	13 January 2024
Day of admission	Day 1	Day 2
Medical diagnosis	GEA	GEA
History of hospitalization	The child has been hospitalized	The child has never been hospitalized
Treatment room	Class II	Class I
Children	First	Second
Freedom self-perception and self-concept pattern	The child had difficulty doing activities because of the IV in the right hand. The patient did not feel comfortable in the hospital. He was fussy, restless, and cried loudly and turned his face away when he saw the doctor/nurse.	The child is difficult to do activities because of the IV in the right hand. The patient cries when approached by the doctor/nurse. The patient is fussy, restless, and minimizes eye contact with the doctor/nurse.
SCAS anxiety scale	36 (moderate)	32 (moderate)

Discussion

Anxiety is a state of unease or worry, often accompanied by the fear that something bad is about to happen. It manifests as unpleasant feelings of tension, restlessness, and fear, often without a clear or identifiable cause (Firmansyah, Fetriyani, Pangesti, & Badi'ah, 2021). Before undergoing Kinderflix video therapy, Patient I had a moderate anxiety level with a score of 36, while Patient II also exhibited moderate anxiety with a score of 32. To address this,

video-watching therapy was introduced as a non-pharmacological intervention. The therapy was administered to both patients at their bedsides due to the presence of IV drips in their right arms. The videos were watched on the bed to ensure that the administration of IV fluids was not disrupted. Each session lasted 10 minutes to prevent fatigue, and both patients were accompanied by their parents. This approach aligns with the principles of non-pharmacological therapy which emphasize minimal energy expenditure, brief sessions, safety, prevention of cross-infection, compatibility with ongoing treatment, and involvement of parents or family members (Delianti et al., 2023). The Kinderflix video therapy was conducted over three days of hospitalisation. On the first day, the mother of Patient I reported that her child was crying out of fear and anxiety, sleeping poorly, and being generally fussy, especially when approached by the nurse. The objective assessment revealed that the child appeared frightened, as evidenced by loud crying, a tense face, restlessness, and pallor, with a moderate anxiety score of 36. On the second day, the anxiety level remained moderate, with scores of 34 and 33 in the first and second evaluations, respectively. In the third day, the child's anxiety had decreased to a mild level, with scores of 30 and 28 in subsequent evaluations.

Table 2. Observation during intervention.

Patient I		Day 1		Day 2		Day 3	
Morning	Pre	Post	Pre	Post	Pre	Post	Post
A	Score 36	Score 36	Score 34	Score 34	Score 30	Score 30	Score 30
	Medium	Medium	Medium	Medium	Mild	Mild	Mild
Afternoon	Pre	Post	Pre	Post	Pre	Post	Post
A	Score 36	Score 36	Score 34	Score 33	Score 28	Score 28	Score 28
	Medium	Medium	Medium	Medium	Mild	Mild	Mild
Patient II		Day 1		Day 2		Day 3	
Morning	Pre	Post	Pre	Post	Pre	Post	Post
J	Score 32	Score 32	Score 31	Score 30	Score 28	Score 20	Score 20
	Medium	Medium	Medium	Medium	Mild	Mild	Mild
Afternoon	Pre	Post	Pre	Post	Pre	Post	Post
J	Score 32	Score 32	Score 30	Score 27	Score 25	Score 17	Score 17
	Medium	Medium	Mild	Mild	Mild	Mild	Mild

Similarly, for patient II, the mother reported that her child was anxious, restless, had trouble sleeping, felt uncomfortable in the hospital environment, and cried when approached by the nurse. The objective assessment showed that the child cried out of fear and anxiety and repeatedly asked to go home. On the first day, the patient's anxiety level was moderate, with a score of 32 at both the first and second evaluations. On the second day, the anxiety level decreased to 30 at the first evaluation and 27 at the second evaluation, still in the moderate range. With the third day, the anxiety level had further decreased to mild, with scores of 25 and 17 in the first and second evaluations, respectively. This demonstrates a significant reduction in anxiety levels for both patients following the Kinderflix video therapy. A study supported that audiovisual distraction therapy is highly effective in reducing moderate anxiety levels (Novitasari, Weti, Ferasinta, & Wati, 2021). The therapy works by helping to release endorphins, which play a key role in reducing stress and pain. In managing anxiety related to situational crises during hospitalisation, therapy that distracts the child from their anxiety is crucial. It promotes relaxation, reduces fear, anxiety, and tension, and helps regulate the body's chemical responses. This distraction allows the child to focus on the activity of watching videos, making them less aware of discomfort and fear during nursing procedures, thereby reducing anxiety levels. The application of audiovisual distraction therapy through video watching has proven effective in lowering anxiety levels in children aged 3-5 with mild to moderate anxiety. The effectiveness of this intervention is evident in the observed reductions in anxiety levels before and after the therapy. Another study also reported that most respondents experienced a significant decrease in anxiety levels after watching animated videos, further demonstrating the efficacy of distraction techniques in reducing both subjective and objective anxiety in children (Padila, Agusramon, & Yera, 2019). The application of Kinderflix video therapy resulted in a marked decrease in anxiety levels for both patients.

Conclusion

The study concluded that video-watching therapy is an effective intervention for reducing anxiety levels in children suffering from acute gastroenteritis (GEA). Initially, patient I presented a higher level of anxiety with a SCAS score of 36, compared to patient II, who had a score of 32. Following the application of the 10-minute video therapy twice daily, both patients exhibited a notable decrease in anxiety. Patient I's score reduced to 28, while Patient II's score dropped to 17, moving both patients into the mild anxiety category. This significant reduction highlights the potential of such

distraction techniques in managing anxiety among young patients undergoing hospitalisation for GEA. To build on these findings, future research should investigate the broader applications of Kinderflix video therapy for children with various clinical conditions beyond GEA. It would be valuable to explore how this approach might influence anxiety in different medical contexts, assess its long-term effectiveness, and determine if adjustments in video content or duration could enhance its benefits. Additionally, research could examine the impact of such interventions on other aspects of hospitalisation stress, such as pain management and overall patient satisfaction. This would help to better understand the full range of benefits that video-watching therapy might offer in paediatric care settings.

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