



## The Effectiveness of Expressive Writing Therapy on Anxiety Levels in School-Age Children Undergoing Hospitalization

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### ABSTRACT

**Introduction:** Anxiety disorders are one of the psychological problems that arise when children undergo hospitalization. Anxiety that is not treated will make the length of hospitalization days and worsen conditions. One of the interventions that can be done to treat anxiety in school-age children undergoing hospitalization is expressive writing therapy.

**Objective:** This study aims to determine the effectiveness of expressive writing therapy on the anxiety of school-age children undergoing hospitalization.

**Methods:** This research design uses quantitative methods with a pre-experimental one group pretest-posttest design. The study sample consisted of 25 respondents selected using purposive sampling technique based on the inclusion criteria, namely school-age children aged 10-12 years who can write, children who are undergoing hospitalization with stable conditions (children who are willing to communicate well and are able to sit on the patient's bed, parents who are willing for their children to become respondents, and children who experience anxiety based on screening results. Anxiety was measured using an instrument (CSAS-C).

**Results:** Data analysis with the Paired Sample t-test test showed a p value = 0.000 ( $p < 0.05$ ) which means there is a difference in the average score of anxiety before and after the expressive writing therapy intervention.

**Conclusion:** Based on the results of the analysis, it can be concluded that there is an effect of expressive writing therapy intervention on the average difference in anxiety of school-age children undergoing hospitalization before and after the intervention.

**Keywords:** anxiety, expressive writing, hospitalization

## **Introduction**

Hospitalization occurs when a child needs to be in the hospital for care and treatment (Rofiqoh, 2016). During hospitalization, children may react in various ways, such as withdrawing, experiencing pain during invasive procedures, feeling fear due to unfamiliarity with the hospital environment, and showing anxiety responses to the new routines they encounter (Pragholapati et al., 2019; Altay et al., 2017; William H. C. Li, 2016; Hockenberry, 2019).

A common psychological response in children undergoing hospitalization is anxiety (Setiawan et al., 2021; Suhanda et al., 2022). According to the World Health Organization (2018), 3%-10% of pediatric patients admitted in the United States experience anxiety during hospitalization. Similarly, about 3%-7% of school-age children treated in Germany also experience anxiety. In 2021, UNICEF reported that 57 million children were hospitalized worldwide. In Indonesia, Riskesdas (2018) found that 60%-80% of 100 children undergoing treatment experienced anxiety disorders. Furthermore, the 2020 national health survey indicated that 35 out of 100 children underwent hospitalization, and 45% of them experienced anxiety (SUSENAS, 2020). Anxiety is an emotional response associated with discomfort or the perception of an unclear threat (Hidayat, 2021). Anxiety in children can be triggered by separation, loss, and pain (Setiawati, 2018).

Children experiencing anxiety during hospitalization often feel stressed and may refuse to participate in activities due to fear of the changes they are going through, which can hinder their healing process (Purnamasarini, 2016). Anxiety in children has both short-term and long-term impacts. In the short term, anxious children may refuse care and treatment, prolonging their hospital stay and worsening their condition. In the long term, anxiety can weaken the immune system and negatively affect cognitive, intellectual, and social development (Hidayat, 2021).

One nursing intervention to help reduce anxiety levels in hospitalized children is expressive writing therapy. This technique allows children to express emotional experiences or feelings that are troubling them. Research by Purnamasarini (2016) showed that expressive writing therapy significantly reduced anxiety among students during school exams. Aisyah's study (2019) found that expressive writing therapy helped manage anger in elementary students who were victims of bullying. Niman's research (2019) also demonstrated the effectiveness of expressive writing therapy in reducing anxiety in children who had experienced bullying, with results showing decreased anxiety levels after therapy.

Given the limited research on expressive writing therapy for hospitalized children, this study aims to explore the effectiveness of expressive writing therapy on the anxiety of school-age children undergoing hospitalization at TK. II. R. W. Mongisidi Hospital.

## **Objective**

The aim of this study is to determine the effectiveness of expressive writing therapy in reducing anxiety levels among school-age children undergoing hospitalization.

## **Method**

The design used in this study was a pre-experimental one-group pretest-posttest. The intervention implemented was expressive writing therapy, aimed at determining the

difference in the average anxiety scores of school-age children undergoing hospitalization before and after the intervention.

The respondents in this study were school-age children hospitalized at TK Hospital R. W. Mongisidi Manado. The sampling technique employed was purposive sampling, which met the following inclusion criteria: a) school-age children aged 10-12 years who could write; b) children who were hospitalized with stable conditions; c) parents who consented for their children to participate as respondents; and d) children who experienced anxiety based on screening results. The exclusion criteria for this study were as follows: a) children with neurodevelopmental issues; b) children with postoperative conditions; c) children with injuries to both hands; and d) children who did not wish to engage in communication or withdrew from participation. The sample size in this study was calculated using the Federer formula, resulting in a total of 25 respondents. This research was conducted from May 22-26, 2024.

The instrument used to measure the anxiety levels of school-age children undergoing hospitalization was the Chinese version of the State Anxiety Scale for Children (CSAS-C). The anxiety level questionnaire (CSAS-C) from Desak (2013) was tested for validity, with a total of 10 questions yielding an  $r$  value  $> 0.514$ , indicating that the questionnaire is valid for use. Reliability testing resulted in a Cronbach's alpha of 0.888, indicating very high reliability, thus affirming that this questionnaire is reliable for use (Desak, 2013).

Univariate analysis was performed to describe the frequency distribution and percentage of respondents' characteristics, including age, gender, hospitalization history, assistance during hospitalization, and diagnosis. Subsequently, bivariate analysis was used to assess the effect of the intervention on anxiety. The anxiety score data were tested for normality using the Shapiro-Wilk test. The results indicated that the data were normally distributed, allowing for the use of the paired sample T-test. This research has passed the ethical review by KEPPK STIK Sint Corolus, with ethical approval number 087/KEPPKSTIKSC/VI/2024.

## Result

Table 1. Distribution of Respondents' Data Characteristics

Variables	n	r	mean $\pm$ SD	p-value
Age	25	-0.163		0.436
Sex				0.618
<i>Male</i>	14		1.14 $\pm$ 0.363	
<i>Female</i>	11		1.18 $\pm$ 0.405	
Hospitalization history				0.128
<i>Ever</i>	8		1.12 $\pm$ 0.332	
<i>Never</i>	17		1.25 $\pm$ 0.463	
Assistance during hospitalization				0.620
<i>Parent</i>	20		1.15 $\pm$ 0.366	
<i>Caregiver</i>	5		1.20 $\pm$ 0.447	

Based on Table 1, the characteristics of the respondents indicated that the majority were 10 years old (40.0%), and most were male, totaling 14 individuals (56.0%). Additionally, it was

found that the majority of respondents had a history of hospitalization, with 17 respondents (68.0%) reporting previous admissions. Most respondents were assisted by a parent, totaling 20 individuals (80.0%).

Table 2. Frequency distribution of respondents based on anxiety level before and after expressive writing therapy intervention

Anxiety Category	Pre-test		Post-test	
	f	%	f	%
Lightweight	1	4.0	21	84.0
Medium	10	40.0	4	16.0
Weight	14	56.0	0	0
Panic	0	0	0	0
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>

Based on Table 2, the average anxiety levels of school-age children undergoing hospitalization before the intervention of expressive writing therapy indicated that the majority of respondents experienced severe anxiety, with 14 respondents (56.0%). Following the expressive writing therapy intervention, most respondents reported mild anxiety, totaling 21 individuals (84.0%).

Table 3. The Effect of Expressive Writing Therapy on Children's Anxiety Levels School Age who Underwent Hospitalization

Time	Mean ± SD	CI 95%	P-value
Pre-test	20,84 ± 2,211	7,654-17,340	0,000 <sup>a*</sup>
Post-test	14,00 ± 1,528		

<sup>a\*</sup> Analyzed using Paired sample T-Test.

\*Significant with  $p < 0.05$

Based on Table 3, the results of the paired sample T-Test show a p-value  $< 0.05$ . Therefore, it can be concluded that there is a significant effect of the expressive writing therapy intervention on the average difference in anxiety levels of school-age children undergoing hospitalization before and after the intervention.

## Discussion

The results of this study indicate that before expressive writing therapy, the majority of respondents experienced severe anxiety (56.0%). These findings are consistent with research conducted by Praghlapati et al. (2019), which stated that children undergoing hospitalization tend to experience severe anxiety due to the new routines they face. Similarly, the study by Rahmnia et al. (2024) also showed that most children experienced severe anxiety during hospitalization. Anxiety is a condition felt when there is a sense of worry about something that will happen. It is closely related to feelings of uncertainty, fear, and worry about the conditions experienced, which can hinder children from engaging in activities they enjoy (UNICEF, 2022; Saputro, 2017). In school-age children, anxiety is often demonstrated through fearful

reactions stemming from a lack of knowledge about their illness, separation anxiety, and fear of pain (Supartini, 2023).

Anxiety reactions commonly exhibited by children include feelings of unhappiness (64.0%) during hospitalization, nervousness (80.0%) when medical procedures are performed, lack of relaxation (40.0%), and worry (60.0%) about their situation. Children also express fear (64.0%) during hospitalization, along with feelings of unhappiness (68.0%), sadness (72.0%), and lack of excitement (52.0%). A study by Ginanjar et al. (2022) revealed that common responses during hospitalization include children crying when approached by strangers, being silent when spoken to, feeling tense, and crying during medical procedures. Anxious responses in hospitalized children arise due to the new routines they encounter and the invasive measures taken (Hockenberry, 2019; Praghlapati et al., 2019).

After the intervention of expressive writing therapy, the average anxiety levels of school-age children undergoing hospitalization decreased, with the majority experiencing mild anxiety (84.0%). This finding aligns with research conducted by Wantini et al. (2022), which showed that the anxiety levels of children aged 7-12 years decreased after receiving expressive writing therapy. Additional literature indicates that expressive writing therapy can effectively reduce psychological issues such as stress. Research by Triyani (2020) demonstrates that expressive writing therapy can lower stress levels in children with HIV/AIDS. Expressive writing therapy is a therapeutic approach that encourages individuals to express their experiences or feelings through writing (Smith, 2020).

The distribution of post-intervention responses indicated a decrease in children's anxiety reactions: children felt nervous (12.0%), did not feel worried (92.0%), did not feel afraid (96.0%), and did not feel distressed (96.0%). Analysis of the characteristics of respondents (age, gender, hospitalization history, and assistance during hospitalization) concerning anxiety scores revealed no significant differences, indicating that there is no relationship between the decrease in child anxiety and these characteristics. This finding is consistent with research conducted by Dewi et al. (2021), which shows that children's anxiety due to hospitalization depends on the level of maturity in their growth and development, their history of separation from loved ones, and the availability of a support system.

Expressive writing therapy has been shown to reduce anxiety, as research by Jones et al. (2021) indicates that when children engage in expressive writing, they become more open to self-understanding. By expressing their feelings through writing, children can better control their emotions, which helps alleviate anxiety. This therapeutic approach allows individuals to articulate their experiences or feelings in writing (Smith, 2020). Expressive writing is beneficial for overcoming anxiety or trauma and helps individuals express their feelings, biomechanically restoring and refocusing attention. It triggers the parasympathetic system, lowering cortisol levels and bringing the body to rest through reduced heart rate, slower breathing, and decreased gastrointestinal activity. This process can change how individuals think and behave, improve emotional regulation, provide renewed energy, redirect attention, relieve emotional distress, and allow them to focus on their own goals and behaviors. According to Pennebaker (2014) and Lutfi et al. (2022), when expressive writing therapy is administered, patients begin writing about their feelings, enabling them to refocus and express their emotions, thereby reducing anxiety.

In this study, expressive writing therapy was implemented over three days for children aged 10-12 years. On the first day, the researcher approached the respondents and encouraged them to write any sentences they wished to convey. The response from the children on this day revealed their shyness and fear of communicating with the researcher. By the second day, the children were able to communicate more effectively. The researcher then initiated the expressive writing therapy by asking the children to write about their unpleasant feelings. The respondents were able to express their feelings independently, detailing their negative experiences during hospitalization. Some expressions noted by the researcher included feelings of discomfort with the environment, anxiety about their health conditions, boredom with activities, unhappiness about not being able to meet school friends, fear when healthcare workers entered the room, dislike of the hospital food, and difficulty sleeping. The feelings expressed by the children align with findings from previous research, which shows that during expressive writing therapy, respondents articulate the emotional words they feel. Hospital treatment activities can induce anxiety as children feel they are losing their familiar environment, playmates, and comforts, while also experiencing noisy surroundings and invasive medical procedures (Pragholapati et al., 2019).

On the third day, the researcher asked the respondents about their feelings during expressive writing therapy. Many respondents indicated that they faced no difficulties during the intervention and felt happy because they could freely express their feelings. Rusidi et al. (2022) noted that respondents were actively engaged during expressive writing therapy, and good communication existed between the researchers and the respondents. This positive interaction is likely because researchers considered the comfort and conditions of the respondents during the therapy.

Based on the results of the analysis, it can be concluded that expressive writing therapy is effective in reducing anxiety in children during hospitalization, as evidenced by a difference in the average anxiety scores before and after the intervention. This intervention is relatively simple. Anzeneder (2018) also stated that expressive writing therapy is an intervention that does not require many tools or significant financial resources. Therefore, it is clear that expressive writing therapy is an important intervention for children undergoing hospitalization to reduce anxiety levels.

## **Conclusion**

Based on the research conducted, it can be concluded that expressive writing therapy is effective in reducing the anxiety of school-age children undergoing hospitalization, as evidenced by the difference in average anxiety scores before and after the intervention. It is recommended that future researchers consider using a two-group pre-experimental design to further develop this intervention.

## ***Conflict of interest***

The researchers stated that there is no conflict of interest related to the implementation and publication of the results of this research. The entire research process, from planning, data collection, analysis, to report preparation, was carried out independently without any influence or pressure from any third party. A commitment to research ethics is upheld throughout the research process, ensuring transparency, accuracy and honesty in reporting

results. Respondents' participation was voluntary with informed consent, and their confidentiality and privacy were maintained in accordance with applicable research ethics standards. With this statement, researchers hope that the research results can be trusted and used as a valid reference for the development of science and health practices related to ethnomedicine and reproductive health.

### **Authors' contribution**

Each author contributed equally in all the parts of the research. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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