

The Effect of Multi-Fold Leaflet Education on the Self-Efficacy of Families of Pediatric Patients in Preoperative Assistance

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ABSTRACT

Surgery in children often causes anxiety among family members due to limited knowledge and preparedness in facing anesthesia and surgical procedures, which may lead to low family self-efficacy in accompanying children during the preoperative phase. Preoperative education is an important strategy to improve understanding, reduce anxiety, and strengthen family confidence. One educational medium that can be used is a multi-fold leaflet because it is able to deliver information in a simple and easy-to-understand manner. This study aimed to determine the effect of multi-fold leaflet education on the self-efficacy of pediatric patients' families in preoperative assistance with general anesthesia at PKU Muhammadiyah Gamping Hospital. This study used a pre-experimental design with a one group pretest-posttest approach. The sample consisted of 58 family members of pediatric patients aged 1–17 years undergoing general anesthesia, selected using purposive sampling technique. Data were collected using a modified General Self-efficacy Scale questionnaire. Data analysis was performed using the Wilcoxon Signed Rank Test. The results showed that before the education intervention, there were 25 respondents (43.1%) with low self-efficacy and 33 respondents (56.9%) with high self-efficacy. After the intervention, the number of respondents with low self-efficacy decreased to 4 respondents (6.9%), while high self-efficacy increased to 54 respondents (93.1%). The results of the Wilcoxon Signed Rank Test showed a p-value = 0.000 (<0.05), indicating that multi-fold leaflet education had a significant effect on the self-efficacy of pediatric patients' families in preoperative assistance with general anesthesia.

Keywords: Self-efficacy, Multi-Fold Leaflet Education, Pediatric Preoperative Care.

Introduction

Surgery is a procedure that involves making an incision to treat certain health conditions and ending with suturing to close the wound (Witri et al., 2022). Children are born with basic instincts and underdeveloped physical and mental functions, making them vulnerable to anxiety and stress when facing surgical procedures (Munthe et al., 2024). During this phase, the role of the family, especially parents, is crucial in providing emotional support, a sense of security, and reassurance to the child. Positive family support can be an effective method in managing anxiety and can even aid the post-operative recovery process (Rini et al., 2025).

Along with the development of healthcare services and advances in medical technology, the number of pediatric surgical cases in Indonesia continues to increase annually. The Indonesian Ministry of Health (2021) reported that more than

800,000 surgical cases are performed annually, approximately 10% to 15% of which are for pediatric patients. This increase in the number of pediatric surgeries has not been matched by improvements in emotional preparedness and understanding of anesthetic procedures, particularly for surgical procedures. *general anesthesia* This can cause the child to lose consciousness completely, requiring full family support during the preoperative phase (Susanty et al., 2021). Many families of pediatric patients still experience anxiety, fear, and even confusion due to a lack of knowledge and adequate preparation regarding the stages and preparations before surgery (Susanty et al., 2021). This situation is particularly urgent because in this procedure, *general anesthesia*, the child will lose consciousness completely, so the family is fully responsible for maintaining the child's emotional stability before the procedure

takes place. Therefore, educational interventions need to be provided immediately before the day of surgery so that the family does not enter the preoperative phase unprepared. Research by Ayu Masriani et al. (2022) shows that in the preoperative phase, almost half of the parents of pediatric patients have moderate anxiety. This low emotional readiness and lack of self-confidence reflect a low level of anxiety. *self-efficacy* family, which can ultimately affect their ability to make decisions and provide optimal support during the treatment process (Alam Syafira et al., 2022). If not addressed immediately, low *self-efficacy* The family can have a negative impact in the form of doubts in decision-making regarding the child's medical procedures (Putri et al., 2022), decreased family ability to calm and accompany the child so that the child's anxiety increases, and the risk of slowing down the child's psychological adaptation process in the post-operative phase.

Karuniawati & Tarumingkeng (2025) explain that family anxiety is often triggered by limited information and ineffective communication with healthcare providers. Preoperative education is a strategic option to address the information gap experienced by patient families. One implementation of this policy is the provision of visual educational media such as *leaflet multi-fold* which functions to help health workers convey information in a simple, interesting, and easy-to-understand manner (Suryani Mujiasyanti et al., 2023). Research by Lestari et al. (2025) shows that providing preoperative education using *leaflet multi-fold* significantly increased knowledge and reduced anxiety levels in preoperative patients. Rustandi et al. (2024) also reported that visual media-based education can strengthen *self-efficacy* family in accompanying the child during the pre-operative process.

Methods

This study uses a quantitative research design with a pre-experimental type and a one-group pretest-posttest design approach. The sampling technique used is *purposive sampling*,

As for the Inclusion Criteria

- 1) Be prepared to be a respondent.
- 2) Family (parents or guardians) of child patients aged 0-17 years who will undergo surgery.
- 3) Families accompanying pediatric patients with planned elective surgery.
- 4) Families who can read and understand Indonesian.

Exclusion Criteria

- 1) Families who have communication, cognitive, or visual impairments

- 2) Families who have previously accompanied their children to surgery.

Data collection was carried out using a questionnaire. *General Self-Efficacy Scale* (GSES) modified. Data collection was conducted over two months, from February to March 2026, at PKU Muhammadiyah Gamping Hospital. The test used was Validity and reliability tests were conducted on 30 respondents. Data processing in the study used the *Wilcoxon Signed Rank Test* to find out the influence of education *leaflet multi-fold* to *self-efficacy* families of pediatric patients before and after intervention. This study has obtained an ethical clearance certificate from PKU Muhammadiyah Gamping Hospital with number 033/KEP-PKU/II/2026.

Results and Discussion

Results

Table 1 Characteristics of Research Respondents

Variables	Category	F	%
Relationship with Patients	Parent	54	93.1
	Still	4	6.9
Amount		58	100
Gender	Man	19	32.8
	Woman	39	67.2
Amount		58	100
Child Age	0-12 Months	0	0
	1-9 Years	34	58.6
	10-17 Years	24	41.4
Amount		58	100

Table 1 shows the characteristics of the respondents in this study. The families of pediatric patients were dominated by parents as caregivers at 93.1%, with the majority being female (67.3%), and the majority of pediatric patients were aged 1-9 years (58.6%).

Table 2 Differences in Self-Efficacy Levels After Being Given Multifold Leaflet Education

Level Self-efficacy Family							
Education/ ailet multi- fold	9-22 (Low)		23-36 (High)		Total		p
	f	%	f	%	f	%	
Before intervention	25	43.1	33	56.9	58	100	0.000
After the intervention	4	6.9	54	93.1	58	100	

Test results *Wilcoxon* as listed in Table 4.6 shows the significance value *p-value* of 0.000 ($p < 0.05$). Based on these findings, it can be concluded that there is a significant influence from providing education. *leaflet multi-fold* to *self-efficacy* families

of pediatric patients between before and after the intervention.

This study shows that the majority of respondents were biological parents, particularly mothers, who were more involved in caring for and supporting their children during the preoperative process. Parents are primarily responsible for making decisions regarding medical procedures, including consent for anesthesia and surgery (Putri et al., 2022). The close emotional bond between parents and children positions parents as the primary support figures during hospitalization (Christiani et al., 2026). Furthermore, women, especially mothers, were more frequently present during health consultations and education because they have a stronger caregiving role within the family (Fitriani et al., 2023). The majority of pediatric patients were in the 1–9 age group, who still have a high level of dependence on their parents for understanding medical situations and coping with surgical procedures (Christiani et al., 2026).

Discussion

1. Family self-efficacy before being given education

Before being given education *leaflet multi-fold*, there are still families with *self-efficacy*. This is low because respondents have not received structured educational interventions related to pediatric surgical preparation. The information families receive during the preoperative phase is generally limited to brief explanations from healthcare professionals, thus not being able to improve comprehensive understanding (Agung Prasetya et al., 2023). *self-efficacy* It is determined by factors such as insight, personal experience, social support, and the individual's psychological or emotional state (Ocha Ananda Suherik & Rini Hildayani, 2024). Lack of knowledge and experience regarding surgical procedures in children can lead families to doubt their ability to provide appropriate support. Research by Ekarynasya Ola Belatan Koban et al. (2025) showed that families of patients who had not received preoperative education tended to experience increased anxiety and lower self-confidence when facing medical procedures in children.

2. Family self-efficacy after being given education

After being given education *leaflet multi-fold*, the number of respondents with *self-efficacy* low decreased to 4 people (6.9%) while *self-efficacy* high increased to 54 people (93.1%), which shows that families received more structured, clear and

easy-to-understand information regarding preparation for child surgery. *Leaflet multi-fold* provide knowledge about *general anesthesia*, the role of the family in providing emotional support, techniques for reducing children's anxiety, and preoperative preparation steps. This educational process reduces family anxiety because the uncertainty previously felt is reduced after the family understands in detail what will happen at each stage of the operation, so that fear of the unknown (*fear of the unknown*) can be suppressed. The information presented concisely and systematically in the leaflet can also be read and studied repeatedly independently, so that families are more cognitively and emotionally prepared to act as support providers for children, for example, calming children, explaining procedures in simple language, and accompanying children in facing their own fears. Research by Elza Nada et al. (2025) states that increasing knowledge and understanding is one of the main factors in forming *self-efficacy* because individuals who understand the situation tend to be more confident in their ability to deal with the condition. However, there were still 4 respondents (6.9%) with *self-efficacy* low levels of self-efficacy after education were provided, which may be influenced by differences in education, health literacy skills, previous experiences, and persistently high levels of anxiety (Harita & Chusairi, 2022). Not all respondents were able to optimally absorb information after just one education session, so some families still needed further information reinforcement or support (Gaghauna et al., 2023).

3. The effect of multi-fold leaflet education on self-efficacy

The results of the Wilcoxon Signed Rank Test showed an effect of multi-fold leaflet education on the self-efficacy of pediatric patient families in general anesthesia preoperative assistance at PKU Muhammadiyah Gamping Hospital with a p value = 0.000 ($p < 0.05$). According to Bandura (1997) in Dhian Sulistyowati et al. (2025), self-efficacy is an individual's belief in their ability to perform the necessary actions to achieve certain goals. Education using multi-fold leaflets provides information that can be read repeatedly and understood independently by the patient's family, thus facilitating the learning process (Rizky Affandi et al., 2022). Multi-fold leaflets also present information concisely, systematically, and structured, making it easier for the patient's family to understand the steps of preoperative assistance (Apriyanti et al., 2025). This finding is in line with the results of research by Elza Nada et al. (2025) showed that providing health education through

educational media was proven to have a significant impact on increasing respondents' knowledge and self-efficacy ($p = 0.000$). Similar results were also reported by Karuniawati & Tarumingkeng (2025) who found a significant decrease in the level of anxiety of patient families after being given therapeutic communication and education, and by Tika Talakua et al. (2026) who showed a significant change in the level of self-efficacy of respondents after receiving health education compared to the previous condition. These conditions indicate that health education through multi-fold leaflet media is effective in increasing understanding, reducing uncertainty, and increasing the self-efficacy of pediatric patient families in accompanying the pre-operative process with general anesthesia.

Conclusion

Based on the overall data analysis in this study, several conclusions were obtained as follows; the characteristics of the families of child patients are dominated by parents as companions, with the majority being female, and the majority of child patients are in the age range of 1-9 years; Level self-efficacy families of child patients before being given preoperative education using media leaflet multi-fold most of them are in the low category; level self-efficacy family of child patients after being given preoperative education using media leaflet multi-fold most of them are in the high category. There is an influence of preoperative education using media leaflet multi-fold towards increasing level self-efficacy family of pediatric patients in preoperative support.

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