



## Management Strategies for Blood Pressure Control in Elective Pre-Surgery Patients: Focusing on Family Support Improvement, Anxiety Control, and Caring Behavior in Receiving Room

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### Abstract

Surgery can be generally defined as a medical action that causes a stressor on a person's integrity, resulting in a stress response, both psychological and physiological. It is totally normal to feel anxious before surgery. This study aimed to identify the management strategies for blood pressure control in elective pre-surgery patients, focusing on family support improvement, anxiety control, and caring behavior. It was an analytical-correlational study which the total samples were 130 respondents at the receiving room of Malang Lavalette Hospital. The data analysis confirmed significant relationships in elective pre-surgery patient care. Family support and nurses' caring behavior had notable impacts on patient anxiety with p values of 0.000 and 0.034 respectively. Moreover, family support and anxiety, as well as anxiety and blood pressure, demonstrated significant associations with p values of 0.000. Notably, family support exhibited a direct effect on blood pressure (0.568) greater than its indirect effect through anxiety (0.453), summing to a total effect of 1.021. Similarly, nurses' caring behavior had a direct effect on blood pressure (0.1225) exceeding its indirect effect through anxiety (0.1099), resulting in a total effect of 0.2324. The researchers found that there was an effect of elective pre-surgery patients management strategies on blood pressure control in terms of increasing family support, anxiety control and caring behavior in receiving room.

**Keywords:** anxiety, blood pressure, elective pre-surgery, family support, nurse caring

### **Strategi Manajemen untuk Kontrol Tekanan Darah pada Pasien Pra-Operasi Elektif: Berfokus pada Peningkatan Dukungan Keluarga, Kontrol Kecemasan, dan Perilaku Peduli di Ruang Penerima**

#### Abstrak

Pembedahan secara umum dapat didefinisikan sebagai tindakan medis yang menyebabkan stressor pada integritas seseorang, menghasilkan respons stres, baik psikologis maupun fisiologis. Sangat normal untuk merasa cemas sebelum operasi. Penelitian ini bertujuan untuk mengidentifikasi strategi manajemen untuk kontrol tekanan darah pada pasien pra-operasi elektif, dengan fokus pada peningkatan dukungan keluarga, kontrol kecemasan, dan perilaku peduli. Penelitian ini merupakan penelitian analitis-korelasional yang total sampelnya sebanyak 130 responden di ruang penerima RS Lavalette Malang. Analisis data mengkonfirmasi hubungan yang signifikan dalam perawatan pasien pra-operasi elektif. Dukungan keluarga dan perilaku peduli perawat memiliki dampak penting pada kecemasan pasien dengan nilai p masing-masing 0,000 dan 0,034. Selain itu, dukungan keluarga dan kecemasan, serta kecemasan dan tekanan darah, menunjukkan hubungan yang signifikan dengan nilai p 0,000. Khususnya, dukungan keluarga menunjukkan efek langsung pada tekanan darah (0,568) lebih besar daripada efek tidak langsungnya melalui kecemasan (0,453), dengan jumlah efek total 1,021. Demikian pula, perilaku peduli perawat memiliki efek langsung pada tekanan darah (0,1225), melebihi efek tidak langsungnya melalui kecemasan (0,1099), menghasilkan efek total 0,2324. Peneliti menemukan bahwa ada efek strategi manajemen pasien pra-operasi elektif pada kontrol tekanan darah dalam hal meningkatkan dukungan keluarga, kontrol kecemasan dan perilaku peduli di ruang penerima.

**Kata Kunci:** kecemasan, tekanan darah, pra-operasi elektif, dukungan keluarga, perawatan perawat

## Introduction

Surgery poses a potential or actual threat to integrity that can elicit physiological and psychological stress reactions. Patients' emotional responses are one of the outcomes of surgical procedures, such as pre-operative anxiety. Physical and psychological changes leading to increased heart rate, blood pressure, respiratory rate, and alterations in energy levels in patients are effects of anxiety, which can ultimately be detrimental to patients as it may impact the surgery's execution. Patient anxiety can arise from a lack of knowledge about the surgical experience and the procedures they are about to undergo. Pre-operative patient anxiety can result in the cancellation or postponement of surgery. Furthermore, anxiety can elevate a patient's blood pressure, and if surgery proceeds despite elevated blood pressure, it can disrupt the effects of anesthesia drugs and may lead to the patient awakening during the surgery (Fadillah, 2017).

In Indonesia, the prevalence of anxiety is estimated to be 9%-12% of the general population, while approximately 80% of the pre-operative patient population experiences anxiety. Among those experiencing anxiety, 65% suffer from severe anxiety, and 35% experience moderate anxiety (Rihiantoro et al., 2019).

Surgery induces excessive fear and anxiety in patients. Problems often arise due to the lack of mental preparation in patients undergoing surgery, resulting in an increased level of anxiety. Psychosocial interventions are crucial for nurses to undertake, aiming to enhance the holistic quality of care provided, including the biological, psychological, social, spiritual, and cultural aspects, in order to reduce varying levels of preoperative patient anxiety (Sigdel, 2015).

The act of surgery is one of the medical procedures that can pose stressors to an individual's integrity, resulting in both physiological and psychological stress reactions. Anxiety about surgery is a common occurrence. One vital approach to preventing anxiety involves the support of family members, especially in the case of pre-operative patients. Family support helps individuals feel comfortable, confident, cared for, loved, and enables them to cope effectively with problems (Ratna, 2017).

Based on a preliminary study conducted on February 6, 2023, in the Receiving Room of

Lavalette Hospital in Malang, there were 53 patients scheduled for elective surgeries in February. Interview results with nurses revealed that out of 10 patients who were scheduled for surgery, 8 respondents experienced anxiety. Remarkably, two out of the eight patients had their surgeries postponed due to anxiety. During the preliminary study, one patient expressed fear about undergoing surgery, particularly fearing anesthesia and the possibility of surgical failure.

Lavalette Hospital in Malang has adopted several management strategies to control blood pressure in pre-operative patients, focusing on increased family support, anxiety management, and caring behavior in the Receiving Room. This is achieved through active communication with the families of pre-operative patients to provide comprehensive understanding of the patient's condition, the planned surgical procedure, and the importance of blood pressure control before surgery. Lavalette Hospital in Malang has a specialized team trained to manage pre-operative patient anxiety. This team provides clear and accurate information to patients about the surgical procedure, associated risks, and efforts made to maintain stable blood pressure. The hospital employs a caring approach that involves all medical staff in the Receiving Room, emphasizing empathy, friendliness, and attentiveness to pre-operative patients. Maintaining open communication between medical staff and pre-operative patients ensures that patients feel heard, understood, and engaged in their care decisions. This can help reduce anxiety and pressure that may affect a patient's blood pressure. These management efforts aim to create an environment that supports pre-operative patients in controlling their blood pressure. With family support, effective anxiety management, and consistent caring behavior from the medical staff providing nursing care.

To reduce patient anxiety in the operating room, Lavalette Hospital in Malang takes measures such as providing Patient Education (KIE) or information sessions on surgical and anesthesia procedures in the Receiving Room. Although these sessions may encounter difficulties, especially with patients who have lower levels of education struggling to understand what the healthcare providers explain, those with a middle-level education find it relatively easier to comprehend

the explanations. Additionally, family members accompany pediatric patients, although there are constraints in the pre-operative room's limited space. Hence, this study aims to examine management strategies for controlling blood pressure in pre-operative patients, considering the increase in family support, anxiety management, and caring behavior in the Receiving Room of Lavalette Hospital in Malang. Through this research, nurses can identify the most influential factors contributing to anxiety and blood pressure fluctuations in patients undergoing elective surgery, providing a reference for addressing these issues.

### Method

The type of research used in this study is analytical correlational research with a cross-sectional approach. This research is employed to Management Strategies for Blood Pressure Control in Elective Pre-Surgery Patients at Lavalette Hospital Malang: Focusing on Family Support Improvement, Anxiety Control, and Caring Behavior in the Receiving Room. This study used correlational analysis with a total sample of 130 respondents in the receiving room of Malang Lavalette Hospital. In order to implement this management strategy, we carried out several key steps. Firstly, we administered a family support questionnaire to the patients. Additionally, we provided nurses with a Caring Questionnaire to assess their caregiving behavior towards the patients. Furthermore, we measured the anxiety levels of the patients using The Amsterdam Preoperative Anxiety and Information Scale (APAIS). During the evaluation process, we also conducted blood pressure measurements on the patients using a sphygmomanometer and stethoscope to monitor and control their blood pressure. and path analysis test was applied to analyzed the data.

### Result and Discussion

According to data analysis, it was evident that there were significant relationships observed in various aspects of elective pre-surgery patient care at Lavalette Hospital Malang. Firstly, family support demonstrated a strong association with anxiety, as indicated by a significant p-value of 0.000 (<0.05). Similarly, nurses' caring behavior significantly affected patient anxiety, with a p-

value of 0.034 (<0.05). Furthermore, family support was found to be significantly linked to blood pressure levels with a p-value of 0.000, as was the case with anxiety and blood pressure (p-value of 0.000). An interesting finding emerged when assessing the influence of family support and nurses' caring behavior through anxiety on blood pressure. The direct effect of family support on blood pressure was greater than the indirect effect through anxiety, with respective values of 0.568 and 0.453, totaling 1.021. Likewise, for nurses' caring behavior, the direct effect on blood pressure (0.1225) outweighed the indirect effect through anxiety (0.1099), summing up to 0.2324. These findings highlight the interconnected nature of family support, nurses' behavior, anxiety, and blood pressure in the care of elective pre-surgery patients.

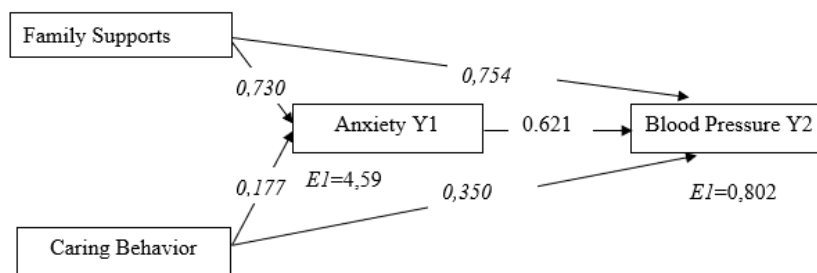
### Discussing

1. Analysis of the Impact of Family Support on Pre-Surgery Patients' Anxiety in the Receiving Room of Lavalette Hospital Malang

The research findings indicate a significant value of 0.000 (<0.05), which means that there is a relationship between family support and pre-operative patient anxiety in the Receiving Room of Lavalette Hospital Malang.

Patient anxiety when facing post-operative situations can be influenced by several factors, such as fear of pain after surgery, physical changes, the severity of the surgery, potential complications, or the fear of experiencing the same condition as others with similar illnesses. Anxiety may manifest as saying they can't sleep, feeling scared, experiencing pain, and worrying about potential complications during the surgery. Involving family support is an essential element of patient care. Family support is one of the factors that can help patients. Family support provides a buffering effect against the negative effects of stress on health, and this support can directly impact health improvement. High levels of support from parents and other family members also enhance self-esteem. Types of support that can be provided to families include psychosocial support. Families need to have a good understanding of how to provide social, psychological, and material support to patients for a speedy recovery (Ulfa, 2017).

**Image 1.** Hypothesis Testing of Path Coefficients According to Sugiyono (2017)



The researcher suggests that patient anxiety can affect their physical and emotional well-being, as well as surgical outcomes. Therefore, it's important to understand the factors that can play a crucial role in controlling pre-operative patient anxiety, and family support is one of them. Family support is a form of emotional, psychological, and practical assistance provided by family members to patients facing health challenges. However, despite the importance of the role of family support in controlling pre-operative patient anxiety, more research is needed to deepen our understanding of this relationship. Further research is necessary to explore the mechanisms underlying the relationship between family support and pre-operative patient anxiety and to identify practical strategies for enhancing family support for pre-operative patients. Patients who feel supported by their families tend to have lower levels of anxiety, feel calmer, and have greater self-confidence when facing surgery.

## 2. Analysis of the Impact of Nurses' Caring Behavior on Pre-Surgery Patients' Anxiety in the Receiving Room of Lavalette Hospital Malang

The research findings also indicate a significant value of 0.034 ( $<0.05$ ), demonstrating a relationship between the caring behavior of nurses and pre-operative patient anxiety in the Receiving Room of Lavalette Hospital Malang. Surgical procedures often have a wide-ranging impact on patients, including psychological effects that can induce fear and anxiety. This fear may stem from unwanted aspects of surgery, such as post-operative pain, potential disabilities, dependency on others, and even the possibility of death (Rahmadani, 2018).

In the field of nursing, caring plays a crucial role in enhancing patients' health and well-being (Khadamian & Vizesfar, 2008). Caring nurses

have a positive impact on patients, increasing their self-confidence and reducing anxiety. Reduced anxiety, in turn, leads to lower stress levels, which can boost the body's defense mechanisms and improve patient recovery (Papatungan & Bataha, 2018). The caring behavior of nurses is closely linked to patient anxiety. Better caregiving by nurses results in reduced patient anxiety because nurses who understand their patients' feelings and provide appropriate care and attention make patients feel comfortable with the care they receive (Papatungan & Bataha, 2018).

Several efforts can enhance nurses' caring behavior. Hospital management can provide training and development related to caring aspects for nurses. This training may encompass empathetic communication skills, cultural sensitivity, emotional management, and the provision of emotional support to patients and their families. Such training can help nurses develop better caring skills. Hospital management can also promote a strong caring culture throughout the organization. This can be achieved by communicating accepted caring values to all staff members and ensuring that these values are reflected in policies, procedures, and daily practices. Management can acknowledge and reward nurses who demonstrate exceptional caring behavior. Hospital management should actively engage nurses in decision-making related to patient care, strategic planning, policy development, and quality improvement. By involving nurses, management can create an empowering work environment that encourages them to provide better care.

The researcher suggests that patient anxiety can impact their overall well-being, including their response to treatment, recovery, and treatment outcomes. Therefore, it is important to understand the factors that can influence the level of patient

anxiety and to seek strategies to manage it. One of the factors that can affect patient anxiety is the caring behavior of nurses. Caring behavior involves empathetic presence, attention, and concern from nurses toward patients. Nurses who demonstrate good caring behavior can establish a positive therapeutic relationship with patients, reduce their anxiety, and enhance the quality of care provided.

### 3. Analysis of the Impact of Family Support on Pre-Surgery Patients' Blood Pressure in the Receiving Room of Lavalette Hospital Malang

The research findings also indicate a significant value of 0.000 ( $<0.05$ ), showing that there is a relationship between family support and blood pressure in pre-operative patients in the Receiving Room of Lavalette Hospital Malang. Angera et al. (2019) explained in their research that immediate family members (parents, siblings, spouses) are the primary support system that provides direct care in all health or sickness situations (patients). Patients greatly need support from those closest to them as a source of encouragement, love, and understanding. Support from parents, siblings, and spouses is essential and can even help expedite the healing process. Family support includes accompanying the patient, seeking information about the upcoming surgery, understanding the reasons for the surgery, preparing financially, and listening to the patient's concerns.

Research by Hulu & Pardede (2016) and Annisa & Suhermanto (2019) suggests that pre-operative patients experience mild anxiety. Hulu & Pardede (2016) found that common signs and symptoms include respondents always feeling their hearts beating rapidly because of the upcoming surgery. This might be due to the anxious feelings stirring within the respondents caused by tension related to the surgical procedure, making the respondents cautious and alert. Annisa & Suhermanto's (2019) research mentions that mild anxiety feelings might be related to previous surgical experiences, anxiety due to the unfamiliarity of the perioperative procedure, anxiety while waiting for the surgery, and concerns about the surgical outcome. Prospective surgery-related fears include the fear of death, fear of the unknown origin of the fear, financial loss, and the surgical outcome.

### 4. Analysis of the Impact of Nurses' Caring Behavior on Pre-Surgery Patients' Blood Pressure in the Receiving Room of Lavalette Hospital Malang

The research findings also indicate a significant value of 0.019 ( $<0.05$ ), demonstrating that there is a relationship between the caring behavior of nurses and blood pressure in pre-operative patients in the Receiving Room of Lavalette Hospital Malang. Preoperative nursing is the initial phase of perioperative nursing. The preoperative phase begins when the decision is made to perform a surgical intervention. Anxiety is considered a normal adaptive response to the stress of surgery (Chrisanto & Nopianti, 2020). Managing anxiety in patients should be done by nurses through caring behaviors. Caring behavior by nurses is an attitude of concern that facilitates patients in achieving improved health and recovery. Caring behavior, as a form of concern, involves paying attention to others, focusing on the individual, respecting dignity and humanity, and a commitment to preventing deteriorating health status (Ananda & Asmawati, 2018). Caring behavior by nurses is a crucial factor in addressing anxiety in preoperative laparotomy patients because nurses are healthcare professionals who have 24-hour contact with patients and have the opportunity to provide comprehensive nursing care by assisting patients in coping with anxiety and meeting their holistic basic needs through caring (Ananda & Asmawati, 2018).

Caring is of utmost importance in the application of nursing care to patients, whether they are individuals, groups, families, or communities. Caring is not a specific treatment given to clients but represents all the factors that nurses use to provide services to clients (Potter & Perry, 2015). Sufficient caring behavior from nurses can minimize the occurrence of anxiety and its implications for increased blood pressure and heart rate in preoperative patients.

### 5. Analysis of the Impact of Anxiety on Pre-Surgery Patients' Blood Pressure in the Receiving Room of Lavalette Hospital Malang

The research findings indicate a significant value of 0.000 ( $<0.05$ ), demonstrating that there is a relationship between anxiety and blood pressure in preoperative patients in the Receiving Room of Lavalette Hospital Malang. Facing surgery for their condition can be challenging for patients who are

not accustomed to being hospitalized or undergoing surgical procedures. This can be observed through severe tension symptoms, frequent sleep disturbances, intelligence disturbances, feelings of depression or sadness, respiratory symptoms, digestive symptoms, and anxiety displayed in behavior or attitudes when facing surgery (Burns & Suddarth, 2002). One of the psychological responses of patients undergoing major surgery can be anxiety. Psychological responses to surgical procedures can range from mild to moderate to severe anxiety, depending on the individual. Some individuals may not be able to control the anxiety they experience, leading to bodily disharmony. In preoperative patients, high levels of anxiety can be considered a maladaptive response that can disrupt physiological functions, lead to increased blood pressure, and impair concentration.

#### 6. Analysis of the Influence of Family Support Through Anxiety on Blood Pressure

The direct influence of family support on blood pressure is calculated as  $(0.754)^2 = 0.568$ . Meanwhile, the indirect influence of family support through anxiety on blood pressure has a value of  $(0.730) \times (0.621) = 0.453$ . Therefore, the total influence of family support on blood pressure is  $(0.568) + (0.453) = 1.021$ . Based on these results, it can be concluded that the direct influence of family support on blood pressure is greater than the indirect influence through anxiety. Thus, it can be inferred that family support has an influence on blood pressure through anxiety.

Nisa et al. (2018) explained in their research that family support includes attitudes, actions, and the acceptance of the family towards the sick individual. One of the roles and functions of the family is to provide affective support for the psychosocial needs of its family members by providing love and care. The presence of family members, especially to provide emotional support to patients through holding their hands or expressing a calm demeanor, can help patients go through the surgical process (Annisa & Suhermanto, 2019). Family support serves as a significant source of support for family members who are ill. The support provided by the family to reduce patient anxiety includes informational support, where the family provides advice, physical and spiritual support. Emotional support is also given by the family, which includes support expressed in the form of affection/attitudes, trust,

attention, listening, and being heard. Other forms of support include appraisal support and instrumental support (Friedman et al., 2016). With good support, patients feel more comfortable, and their feelings of anxiety can be alleviated. The reduction in anxiety can have an impact on the physiological aspects of patients, such as their heart rate and blood pressure.

#### 7. Analysis of the Influence of Nurses' Caring Behavior Through Anxiety on Blood Pressure

The direct influence of caring behavior by nurses on blood pressure is calculated as  $(0.350)^2 = 0.1225$ . Meanwhile, the indirect influence of caring behavior by nurses through anxiety on blood pressure has a value of  $(0.177) \times (0.621) = 0.1099$ . Therefore, the total influence of caring behavior by nurses on blood pressure is  $(0.1225) + (0.1099) = 0.2324$ . Based on these results, it can be said that the direct influence of caring behavior by nurses on blood pressure is greater than the indirect influence through anxiety. Thus, it can be concluded that there is an influence of caring behavior by nurses on blood pressure through anxiety.

Preoperative anxiety, as described above, is often linked to misconceptions about the surgical procedure or a lack of information about the pre, intra, and postoperative impacts. Nurses are expected to conduct thorough assessments and provide adequate preoperative education or training to patients so that anxiety can be tolerated. Real or vague concerns need to be addressed by nurses by applying caring behaviors to preoperative patients by showing care both verbally and non-verbally and understanding the patient so they can express their feelings or understanding. Nurses should also provide appropriate information to help alleviate patient anxiety (Alifitah, 2007). Caring behavior can enhance self-actualization, support individual growth, maintain human dignity and values, aid self-healing, and reduce anxiety or distress (Kozier, 2010).

Caring behavior involves comfort, compassion, concern, coping behavior, empathy, support, and trust. The goal of caring is to improve and enhance human conditions by emphasizing healthy and easy activities that are mutually agreed upon by individuals involved. According to Miller, caring is an intentional act that creates physical and emotional security, genuinely carried out by the caregiver and the recipient of nursing care (Purwaningsih and Karlina, 2012). Caring

behavior by nurses can reduce preoperative patient anxiety due to the warm, attentive, and firm attitude of the nurse. Adequate caring behavior by nurses can minimize the occurrence of anxiety, which, in turn, affects the physiological aspects of preoperative patients, including their heart rate and blood pressure.

## Conclusion

Data analysis showed significant relationships in elective pre-surgery patient care at Lavalette Hospital Malang. Family support and nurses' caring behavior significantly affected patient anxiety. Family support, anxiety, and blood pressure were also significantly linked. Family support had a stronger direct effect on blood pressure than its indirect effect through anxiety, as did nurses' caring behavior. These findings emphasize the interconnected relationship between family support, nursing behavior, anxiety, and blood pressure in patient care.

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