

Perioperative Health Education Improves Coping Mechanisms in Preoperative Cataract Patients

Enggal Hadi Kurniyawan¹, Popi Dyah Putri Kartika², Siswoyo³, Wantiyah³, Murtaqib³, Fitrio Deviantony¹, Yeni Fitria¹

¹Mental Health Nursing Department, Faculty of Nursing, Universitas Jember, Indonesia

²Undergraduate Nursing Student, Faculty of Nursing, Universitas Jember, Indonesia

³Medical-Surgical Nursing Department, Faculty of Nursing, Universitas Jember, Indonesia

Correspondence should be addressed to:
Enggal Hadi Kurniyawan
enggalhadi.psik@unej.ac.id

Abstract:

Patients with cataracts can experience psychological and physiological impacts; the physiological impact caused is discomfort in sight, while the psychological impact on patients is anxiety because they will have surgery on the eye. This study aims to analyze the effect of providing perioperative health education on the coping mechanisms of preoperative cataract patients. This study used a quasi-experimental research design with a pre-test and post-test research approach with a control group design. The research sampling technique used is consecutive. The sample in this study were cataract patients who were going to perform cataract surgery as many as 30 respondents. Analysis of the data used the dependent t-test and independent t-test. This study's results indicate differences in coping mechanisms in the measurement of the treatment and control groups, with a p-value = 0.001. This study concluded that there were significant differences in coping mechanisms after being given perioperative health education in the treatment group and the control group. Nurses are expected to be able to apply health education to preoperative cataract patients so that the patient's coping becomes adaptive and ready for surgery.

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INTRODUCTION

Cataract disease is a disorder of the human eye, a condition in which the lens of the eye experiences cloudiness caused by hydration of the lens and denaturation of lens proteins (Sudrajat et al., 2021). A person with cataracts can experience psychological and physiological impacts; the physiological impact caused is discomfort in vision, while the psychological impact on patients is anxiety because of surgery on the eye. Anxiety experienced by preoperative patients is a symptom of anxiety that arises when a person is faced with certain situations or circumstances (Kusmarjathi, 2009).

Perioperative nursing is a nursing intervention activity related to the patient's surgical experience. Perioperative is a combination of terms that includes three stages in a surgical process, namely the preoperative, intraoperative, and postoperative stages. Each stage includes nursing interventions and support from other health teams as a team in surgical services (Majid et al., 2011). Preoperative nursing begins when deciding to perform surgery and ends when the patient is transferred to the operating room (Potter & Perry, 2005). Preoperative patients who

experience anxiety are caused by several factors, including fear of surgery and pain, doubts about anesthesia, and hospital costs (Kusmarjathi, 2009).

Health education is an effort a person or community makes to achieve abilities toward a good direction in everyday life (Setioputro et al., 2022). Health workers, especially nurses, are responsible as educators to convey information to motivate patients about the importance of learning (Smeltzer, 2001). Knowledge of cataract patients will increase for the better after getting psychoeducation (Siswoyo, 2015).

Coping mechanisms are a response used by individuals to deal with problems that can cause stress (Rachmah & Rahmawati, 2019). A coping mechanism is a mechanism that a person uses to deal with changes that occur (Patuh et al., 2021). Patients who fail to adapt and cannot use coping mechanisms to deal with stress will experience physical and mental disorders (Kurniyawan et al., 2022). Patients use coping mechanisms to minimize problems experienced, such as stress, anxiety, and depression, so that the patient's psychosocial stability remains stable (Intiyaskanti et al., 2021). The severe stress suffered has the risk of producing maladaptive coping mechanisms in individuals (Ariviana et al., 2021). The patient can carry out coping strategies with a focus on emotions by taking lessons or positive meanings in personal development efforts related to religiosity (Kurniyawan et al., 2023). This study aims to analyze the effect of providing perioperative health education on the coping mechanisms of preoperative cataract patients.

METHOD

The study used a quasi-experimental research design with a pre-test and post-test research approach with a control group design. The research sampling technique used in this study is consecutive. The sample in this study were cataract patients at Baladhika Husada Jember Hospital who would perform cataract surgery for as many as 30 respondents, which were then divided into a treatment group of 15 respondents and a control group of 15 respondents.

Respondents' inclusion criteria in this study were patients who had never experienced surgery before, could communicate well, could participate in activities until they were finished, and were willing to become respondents. Respondents' exclusion criteria were patients withdrawing from the study, patients experiencing situational conditions such as canceled operations, patients experiencing complications such as glaucoma/uveitis, and patients having contraindications for surgery (hypertension, stroke, and DM).

Researchers conducted perioperative health education using the lecture method; health education was carried out for 30 minutes in the operating waiting room at the Eye Clinic of Baladhika Husada Hospital Jember and gave leaflets to patients. The pre-test is carried out when the patient has an eye examination, while the post-test is carried out when the patient is about to undergo cataract surgery within 7-9 days. Coping mechanisms in preoperative cataract patients were measured using a coping mechanism questionnaire sheet.

The validity and reliability of the coping mechanism questionnaire were carried out at Balung Hospital with 15 respondents. The questionnaire before the validity test consisted of 30 questions, and the results of the validity test obtained 20 valid questions with the value of r table for 15 respondents was 0.5140. The reliability test results obtained an alpha of 0.975, so the 20 questions were declared very reliable.

The results of the normality test using the Shapiro-Wilk test on the coping mechanism variable in the treatment group showed a p -value in the pre-test of 0.846 and a post-test value of 0.953 and the control group showed that the p -value in the pre-test was 0.924 and the post-test value was 0.963, so that stated that all data is normally distributed. Normally distributed data is

required for the dependent t-test and independent t-test. The homogeneity test results using Levene's test on the coping mechanism variable in the treatment and control groups are known to have a p-value = 0.227, so the data is homogeneous.

RESULT

Characteristics of Respondents

Table 1. Distribution of Respondents by Age at Baladhika Husada Hospital Jember (n=30)

Variable	Mean	Median	SD
Age (years) Treatment group	57.27	56.00	5.824
Age (years) Control group	57.80	59.00	6.700

Respondent characteristics include age, gender, education, occupation, and marital status. Table 1 shows that the average age of the respondents in the treatment group was 57.27 years, and the control group was 57.80 years.

Table 2. Distribution of Respondents by Gender, Education, Occupation, and Marital Status at Baladhika Husada Hospital Jember (n=30)

Variable	Treatment	Control	Total
Gender			
Man	6	7	13
Woman	9	8	17
Education			
Primary school	9	11	20
Junior high school	5	3	8
High school	1	1	2
College	0	0	0
Profession			
Does not work	3	3	6
Civil servant	1	1	2
Self-employed	6	5	11
Farmer	5	6	11
Retired	0	0	0
Etc.	0	0	0
Marital status			
Single	2	0	2
Marry	13	15	28

Based on table 2, the sex of the respondents was predominantly female, namely as many as 17 people. Most of the respondent's educational level is elementary school, with as many as 20 people. Most of the respondents' jobs were self-employed, namely 11 people, and farmers, namely 11 people. Most of the respondent's marital status was married, namely 28 people.

Coping Mechanisms in the Treatment Group and Control Group

Table 3. Differences in Coping Mechanisms in the Treatment Group and the Control Group at Baladhika Husada Hospital Jember (n=30)

Coping mechanism	Mean		Mean Different
	Pre-Test	Post-Test	
Treatment group coping mechanisms	71.27	87.27	16
Control group coping mechanisms	64.60	69.67	4.93

Based on table 3, it is known that the increase in coping mechanisms that occur in the treatment group is more significant than the control group, with a value of 16 for the treatment group and 4.93 for the control group

Effect of Health Education on Coping Mechanisms

Table 4. Results of Dependent T-Test Analysis Differences in Average Coping Mechanisms in the Treatment Group and the Control Group at Baladhika Husada Hospital Jember (n=30)

Group	Coping mechanism	Different Mean	t	p-value
Treatment	Pre-test	-16.000	-7.055	0.001
	Post-test			
Control	Pre-test	-4.933	-4.373	0.001
	Post-test			

Based on the dependent t-test in table 4 in the treatment group, it was found that the mean difference in coping mechanisms before and after being given perioperative health education was -16,000 with a t-value of -7.055 and a p-value = 0.001, which means there were differences in coping mechanisms before and after being given the intervention. A negative value on t indicates that the value of the coping mechanism at the initial measurement is lower than the coping mechanism at the time after the intervention is given. This means there is an increase in coping mechanisms after being given perioperative health education.

In the control group, the mean difference in coping mechanisms was -4.93 with a t-value of -4.373 and a p-value = 0.001, which means there was a difference in the mean coping mechanisms during the pre-test and post-test in the control group without intervention. A negative t value indicates an increase in coping mechanisms because the pre-test value is lower than the post-test value.

Differences in Coping Mechanisms between the Treatment Groups and the Control Group

Table 5. Results of Independent T-Test Analysis of Coping Mechanisms in the Treatment Group and Control Group at Baladhika Husada Hospital Jember (n=30)

Variable	Different Mean	SD	t	p-value
Treatment group coping mechanisms	16.00	8.783	4.009	0.001
Control group coping mechanisms	4.93	3.701		

The independent t-test in table 5 shows a difference in the average value of the coping mechanism in the treatment group measurement, 16.00, with a group standard deviation of 8.783. The difference in the average value of coping mechanisms in the measurement of the control group is 4.93, with a standard deviation of the control group of 3.701. Differences in coping mechanisms in the measurement of the treatment group and the control group with a p-value = 0.001; the conclusion is that there are significant differences in coping mechanisms after being given perioperative health education in the treatment group and the control group.

DISCUSSION

Coping Mechanisms Before and After Conducting Perioperative Health Education in the Treatment Group

The results showed that the differences in coping mechanisms before and after being given perioperative education in the treatment group were tested using the dependent t-test showing p value = 0.001. These results indicate significant differences in coping mechanisms before and after being given perioperative health education. Hadidi (2016) research states that the knowledge imparted through education will change the patient's mindset to increase knowledge about the disease and its management. Individuals can adopt coping strategies that have been taught, namely being able to accept the state of the disease and begin to use specific coping strategies to deal with the problem of the disease.

In addition to providing health education, other factors can improve coping in patients with preoperative cataracts, namely the existence of spiritual support such as worship and prayer and support from the surrounding environment from family, friends, and other people. Such support can assist patients in overcoming situations that can cause stress and facilitate patients in selecting appropriate coping strategies according to their circumstances. Factors that can influence individual coping are social support accompanied by an environment that supports both physically and psychosocially (Yusuf & Nurihsan, 2004). Coping mechanisms in patients with pre-cataract surgery can be improved if the patient knows about the disease, knows about treatment for cataracts, what must be prepared before cataract surgery and how to care after surgery for recovery.

Coping Mechanism of Initial Measurement (Pre-Test) and Final Measurement (Post-Test) in the Control Group

Differences in the coping mechanism of the initial and final measurements in the control group were also tested using the dependent t-test, with the results of the test showing p value = 0.001. Coping mechanisms in the control group experienced a slight increase because the control group was not given perioperative health education interventions. Even though cataract surgery uses surgical techniques that are pretty safe with minimal risk of surgical failure and requires small incisions, cataract patients who do not know about this information will feel anxious and anxious. Patients who experience physiological and psychological stress reactions make the patient less cooperative, and the patient's coping becomes non-adaptive.

Many factors can influence the success of health education, namely individual awareness to understand material topics, level of education, external and internal situations, and individual motivation (Notoatmojo, 2010). The coping mechanism for respondents with a fixed value or a slight increase was because respondents in the control group did not receive information directly from the researcher. The elderly experience a decline in the cognitive and intellectual system

called dementia, which causes a person to lose the ability to solve problems, control emotions, and change behavior.

Differences in Coping Mechanisms in the Treatment Group and the Control Group

Based on the study's results, it was shown that the coping mechanism variable between the treatment group and the control group obtained a value of $t = 4.009$ and $p\text{-value} = 0.001$. Based on the results of this study, there are significant differences in the value of coping mechanisms in the two groups, namely the treatment group and the control group. The results of this study are in line with Kushariyadi (2010), which states that there are statistical differences in congestive heart failure patients before and after being given information; the more adequate the information is given, the better or adaptive coping is formed.

Respondents' coping mechanisms are influenced by several factors, including the patient's physical health, because to overcome a problem, sufficient energy and vital energy are needed. Belief or optimistic view of the patient belief in the patient can be formed by himself to show behavior or action that can change the mindset. Skills in solving problems by seeking information, identifying problems, and making an appropriate action plan. The ability to socialize and communicate with the community, the presence of social support from family, friends, and the community. Work and material support are also necessary to meet needs and treat illnesses (Lazarus & Folkman, 1984).

The role of a nurse is to provide education regarding coping behavior to deal with stress because when coping is ineffective, stress will increase (Pusparini et al., 2021). Coping using divinity, religion, or coping with religiosity can provide good moral construction so that patients can control their emotions (Basri et al., 2021). During counseling, nurses are expected to know the source of patient pressure and know coping strategies to manage the pressure encountered (Asmaningrum et al., 2021). Health education given to patients is an external factor that can influence the patient's response in increasing the ability to strengthen coping strategies to solve problems so that self-copying, which was initially maladaptive, becomes adaptive.

CONCLUSION

There were significant differences in coping mechanisms in the treatment group and the control group; namely, an increase in the value of coping mechanisms was more remarkable in the treatment group, so it could be concluded that there was an influence of perioperative health education on coping mechanisms in preoperative cataract patients. Nurses are expected to be able to apply health education to preoperative patients, especially cataract patients with poor or non-adaptive coping, so that patients are ready for surgery and improve coping in preoperative patients to become adaptive.

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