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## The Relationship between Knowledge and Anxiety Levels in Preoperative Cataract Surgery Patients at the Eye Clinic, Dr. Rom. Djoelham Binjai 2022

**Nanarita Tarigan**

Nursing Professional Study Program, Institute for Research and Community Service, Stikes Putra Abadi Langkat

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Eye**ABSTRACT**

Cataract is a condition of decreased vision due to clouding of the eye lens. If the lens becomes cloudy, then vision also becomes blurred. Cataracts are generally a disease in the elderly around the age of 50 years, or also called art cataracts. Objectives To determine the relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic, RSUD Dr. RM. Djoelham Binjai in 2022. The factors that cause cataracts are age, physical, chemical, predisposing diseases, genetics, and viral infections during fetal growth. There are various factors that cause cataracts, including: The results showed that out of 30 respondents, the majority of patients were anxious about pre-cataract surgery, amounting to 18 people and a minority of patients not being anxious about pre-cataract surgery, amounting to 12 people. Based on the results of the chi square test, the relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022 with a degree of significance ( $\alpha$ ) = 0.05 and  $df = 1$ , the calculation results are Sig (2-tailed)  $0.025 < (\alpha) = 0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted

E-mail:  
Nanarita Tarigan@gmail.com

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### 1. Introduction

Cataract is a condition of decreased vision due to clouding of the eye lens. If the lens becomes cloudy, then vision also becomes blurred. Cataracts are generally a disease in the elderly around the age of 50 years, or also called senile cataracts (Ilyas, in Bagas, 2022). The world's population with visual impairment in 2010 was 285 million people, with details of 39 million people suffering from blindness and 246 million people experiencing low vision. As for 65% of people with visual impairments and 82% of blind people aged 50 years or older. The main cause of blindness is cataract with a percentage of 51% of all blindness in the world (WHO, in Bagas, 2022).

The prevalence of cataracts in Indonesia in 2013 was 1.8%. The highest prevalence of cataracts was in North Sulawesi 3.7% followed by Jambi 2.8% and Bali 2.7%. The lowest cataract prevalence was found in DKI Jakarta 0.9% followed by West Sulawesi 1.1%. Meanwhile, the prevalence of cataract in Lampung Province is 1.5%. The three main reasons people with cataracts have not operated on are ignorance (51.6%), inability (11.6%), and lack of courage (8.1) (Kemenkes RI, 2015).

Management of blindness due to cataracts is by performing surgery previously given topical anesthesia or local anesthesia. There are several surgical procedures for cataracts, namely extracapsular cataract extraction (EKEK) and intracapsular cataract extraction (EKIK). (Ilyas, 2016). The newest types of cataract surgery are phacoemulsification surgery and Femtosecond Laser Assisted Cataract Surgery (FLACS). Phacoemulsification is a surgical procedure that uses ultrasound energy to break the cloudy lens mass into small pieces, making it easy to aspirate into the machine. Femtosecond Laser Assisted Cataract Surgery (FLACS) is the removal of the cloudy eye lens with the help of laser light in a cataract incision without sutures which is controlled by a computer system, so that the healing process is faster with much better results (PERDAMI, 2017).

Cataract Surgical Rate (CSR) is the number of cataract operations per one million population per year. In 2016 WHO stated that Indonesia's CSR number was around 465, while PERDAMI in 2012

stated that Indonesia's CSR number was around 700 - 800. If we refer to the CSR indicators, if Indonesia targets CSR 2000, then the number of cataract surgeries is needed for the Indonesian population (estimated 250 million) which is 500,000 cataract operations per year. According to PERDAMI, the estimated capacity for cataract surgery by ophthalmologists in Indonesia is around 150,000-180,000 per year. This calculation shows that to achieve the 2000 CSR rate, Indonesia has a cataract surgery backlog of 320,000-350,000 per year. (Ministry of Health RI, 2014). If you don't treat backlog cataracts immediately,

Preoperative anxiety of cataract surgery often affects most patients. Research conducted to assess the level of anxiety in cataract patients found that 55.6% of respondents felt anxious before performing surgery for different reasons, namely, anxiety because they were worried that their vision would not fully recover (19.6%), complications occurred during surgery (9%), surgery (7%), failed surgery (7%), blind (7%), anesthesia (6%) (Ramirez, 2017).

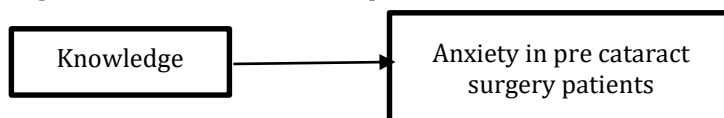
The fear and anxiety experienced by the patient can affect the body's physiological response which is characterized by physical changes such as increasing the pulse frequency, rising blood pressure and increasing respiratory rate, as well as uncontrolled hand movements, moist palms, restlessness, asking the same questions. repeatedly, difficulty sleeping, frequent urination, headaches, and blurred vision. Good preparation during the operation period helps reduce the risk of surgery and improve postoperative recovery (Long in Sari, 2016).

The provision of knowledge and understanding of preoperative surgery needs to be considered as a way to reduce the level of anxiety in cataract patients who will undergo surgery or surgery (Tauqir, in Bagas, 2022). From a preliminary study conducted by researchers by conducting interviews with 5 preoperative cataract surgery patients at RSUD DR RM Djoelham Binjai, 4 of the patients said they were afraid and anxious about cataract surgery.

## **2. Research methods**

### **2.1 Conceptual framework**

Conceptual framework is the focus of research to be studied, this conceptual framework consists of independent variables. The conceptual framework of this research is as follows:



### **2.2 Research Hypothesis**

The hypothesis is a temporary answer that must be tested for truth in the research the proposed hypothesis is:

Ha : There is a relationship between knowledge and level of anxiety in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM Djoelham Binjai in 2022.

Ho : There is no relationship between knowledge and level of anxiety in preoperative cataract surgery patients at the Eye Polyclinic, RSUD Dr. RM Djoelham Binjai in 2022.

### **2.3 Types of research**

The type of research used is a research with a cross-sectional study design. The purpose of the research is to determine the relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM Djoelham Binjai in 2022 (Hastono, 2017).

### **2.4 Place and time of research**

The research will be carried out at the Eye Clinic of Dr RM Djoelham Binjai Hospital and the time of the research will be carried out in February-June 2020.

### **2.5 Population and Sample**

The population in this study were all cataract patients who were outpatient at the Eye Clinic of Dr RM Djoelham Hospital totaling 30 people. All cataract patients who were outpatients at Dr RM Djoelham Binjai Hospital, sampling was carried out by Total Sampling with a total of 30 people. In sampling, inclusion and exclusion criteria are needed to reduce the risk of bias. The criteria for the research sample taken were outpatient cataract patients who met the following inclusion criteria:

- a. Cataract patient.
- b. Can communicate using Indonesian.

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- c. Able to write and read
- d. Compost mentis level of consciousness.
- e. Willing to be a respondent by signing an informed consent.

## 2.6 Method of collecting data

This study uses primary data obtained from respondents by using a questionnaire as a measuring tool. First, an explanation of the purpose of the study was given and an explanation of the questionnaire, how to fill it out and asked the respondent if there was something that was not understood. Data obtained at RSUD Dr RM Djoelham Binjai in 2022

## 3. Results And Discussion

Univariate analysis was conducted to see the distribution of each research variable. This chapter describes the results of research and discussion of the relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022. The data was obtained through a collection process with a total of 30 respondents.

### 3.1 Univariate Analysis

Each research variable. Based on the results of research conducted which aims to determine the relationship between knowledge and anxiety levels in pre-operative cataract patients at the Eye Polyclinic, RSUD Dr. RM. Djoelham Binjai in 2022 with a total of 30 people. The frequency distribution based on the patient's knowledge of anxiety in preoperative cataract surgery patients is as follows:

TABLE 1  
Frequency Distribution of Respondents Based on Respondents Characteristics  
at the Eye Poly Hospital Dr. RM. Djoelham Binjai in 2022 (n = 30)

No	Variable	Frequency (f)	Percentage
1	Age		
	a. Late Teen 17-25	14	46.7
	b. Early adult 26-35	10	33.3
	c. Late adult 36-45	6	20.0
<b>Total</b>		<b>30</b>	<b>100</b>
2	Work		
	a. Working	17	56.7
	b. Doesn't work	13	14.3
<b>Total</b>		<b>30</b>	<b>100</b>
3	Education		
	a. JUNIOR HIGH SCHOOL	9	30.0
		15	50.0
	b. SENIOR HIGH SCHOOL	6	20.0
	c. PT		
<b>Total</b>		<b>30</b>	<b>100</b>

Based on the table above, it is known that of the 30 respondents, the majority of respondents in their late teens were 14 people (46.7%) and the minority of late adults was 6 people (20.0%). Based on the table above, it is known that of the 30 respondents, the majority of respondents work as many as 17 people (56.7%) and the minority of respondents who do not work are 13 people (14.3%). Based on the table above, it is known that from the 30 respondents, the majority of respondents were in high school education amounted to 15 people (50.0%) and the minority PT was 2 people (6.7%).

### 3.2 Knowledge

TABLE 2  
Frequency Distribution of Respondents Based on Knowledge Variables in Preoperative Patients  
Cataract Surgery at the Eye Polyclinic, Dr. RM. Djoelham Binjai in 2022 (n = 30)

No	Variable	Frequency (f)	Percentage
1	Knowledge		
	a. Well	13	43.3
	b. enough	12	40.0
	c. not enough	5	16.7
<b>Total</b>		<b>30</b>	<b>100</b>

Based on the table above, it is known that of the 30 respondents, the majority of good knowledge amounted to 13 people (43.3%) and the minority with less knowledge amounted to 5 people (16.7%).

### 3.3 Worry

TABLE 3  
Frequency Distribution of Respondents Based on Anxiety Variables in Pre-Patients  
Cataract Surgery at the Ophthalmology Polyclinic, RSUD Dr. RM. Djoelham Binjai in 2022 (n = 30)

No	Variable	Frequency (f)	Percentage
1	Worry		
	a. Worried	18	60
	b. Don't worry	12	40
Total		30	100

Based on the table above, it is known that of the 30 respondents, the majority of patients were anxious about pre-cataract surgery, amounting to 18 people (60%) and the minority of patients not being anxious about pre-cataract surgery, amounting to 12 people (40%).

### 3.4 Bivariate Analysis

Bivariate analysis was conducted to determine the relationship between the independent variable and the dependent variable. The analysis was carried out using the Chi-Square test at a 95% confidence level, so that if the results of statistical analysis  $p < 0.05$  were found, the variables were stated to be significantly related.

TABLE 4  
Frequency Distribution of Respondents Based on Anxiety Variables in Pre-Patients  
Cataract Surgery at the Ophthalmology Polyclinic, RSUD Dr. RM. Djoelham Binjai in 2022 (n = 30)

No	Knowledge	Worry				Total		df	Sig (2-tailed)
		No Worry		Worried		n	%		
		n	%	n	%				
1.	Well	12	80	3	20	15	100	1	0.025
2.	Not good	6	40	9	60	15	100		
Amount		18		12		30	100		

Based on the table above, it is known that of the 30 respondents with good knowledge, the majority of respondents were not anxious, namely 12 people (80%) and the minority had good knowledge, as many as 3 respondents were anxious (20%). Of the 30 respondents with poor knowledge, the majority of respondents were anxious as many as 9 people (60%) and the minority had poor knowledge, respondents were not anxious, namely 6 people (40%).

Based on the results of the chi square test, the relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022 with a degree of significance ( $\alpha$ ) = 0.05 and  $df = 1$ , the calculation results are  $Sig (2-tailed) 0.025 < (\alpha) = 0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted. The conclusion is that there is a relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022.

### 3.5 Discussion

#### a. Characteristics of Respondents

Based on the table above, it is known that of the 30 respondents, the majority of respondents in the early elderly were 14 people (46.7%) and the minority of early adults was 6 people (20.0%). Age shows a measure of the time of growth and development of an individual. Age is correlated with experience, experience is correlated with knowledge, understanding and views of a disease or event so that it will form perceptions and attitudes. Revealing that the older the individual's psychological maturity, the better, meaning that the more mature a person's psychology is, the better the adaptation to anxiety will be. (Feist, 2022). The older a person gets, the more experience he gets, the better his knowledge. (Notoatmodjo, 2017).

Based on the table above, it is known that of the 30 respondents, the majority of the male respondents were 17 people (56.7%) and the female gender minority was 13 people (43.3%). In general, an adult male has a strong mentality towards something that is considered threatening to himself and men have a higher level of knowledge and insight than women. (Sunaryo, 2016).

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Based on the table above, it is known that from the 30 respondents, the majority of respondents were in high school education amounted to 15 people (50.0%) and the minority PT was 2 people (6.7%). Education is a human effort to determine and develop innate potential both physically and spiritually in accordance with the values that exist in society and culture (Istiari, 2016). Education is one of the important factors to get and digest information more easily. Finally, understanding a changing condition will be easier to understand and internalize (Hidayat, 2018).

## b. Knowledge

Based on the table above, it is known that of the 30 respondents, the majority of good knowledge are 50 people (50.0%) and the minority of good knowledge are 50 people (50.0%). A person's knowledge is usually obtained from experience that comes from various sources such as poster media, close relatives, mass media, electronic media, manuals, health workers, and so on. Knowledge is a process by using the five senses that is carried out by a person on a particular object to produce knowledge and skills. (Hidayat, 2018).

## c. Worry

Based on the table above, it is known that of the 30 respondents, the majority of patients were anxious about pre-cataract surgery, amounting to 17 people (56.7%) and the minority of patients not being anxious about pre-cataract surgery, amounting to 13 people (43.3%). The client's anxiety arises from an unclear and diffused sense of worry related to feelings of uncertainty, helplessness, and unspecified objects. Anxiety is manifested directly through physiological changes such as (shaking, sweating, increased heart rate, abdominal pain, shortness of breath) and behavioral changes such as (restlessness, rapid speech, startled reactions) and indirectly through the emergence of symptoms in an effort to fight anxiety. (Stuart, 2018).

## d. The Relationship between Knowledge and Anxiety Levels in Preoperative Cataract Surgery Patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai 2022

Based on the results of the chi square test, the relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022 with a degree of significance ( $\alpha$ ) = 0.05 and  $df = 1$ , the calculation results are Sig (2-tailed)  $0.025 < (\alpha) = 0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted. The conclusion is that there is a relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022.

The decision to undergo surgery is highly individual. Surgery or surgery often causes anxiety. Anxiety is a vague and diffuse worry, which is associated with feelings of uncertainty and helplessness and this emotional state has no specific object. The client's anxiety arises from an unclear and diffused sense of worry related to feelings of uncertainty, helplessness, and unspecified objects. Anxiety is manifested directly through physiological changes such as (shaking, sweating, increased heart rate, abdominal pain, shortness of breath) and behavioral changes such as (restlessness, rapid speech, startled reactions) and indirectly through the emergence of symptoms in an effort to fight anxiety. (Stuart, 2018).

Anxiety is a vague and diffuse worry associated with feelings of uncertainty and helplessness. Behavioral theory states that anxiety is the result of frustration due to various things that affect individuals in achieving the desired goals, for example a patient who wants to recover from his illness by undergoing surgery, then from these results it will trigger anxiety (Stuart, 2018). Anxiety arises due to individual psychological reactions, anxiety can arise automatically as a result of excessive internal and external stimuli, due to excessive stimuli that exceed the ability to handle it (Kusumawati, 2016).

Surgery or cataract surgery is one of the stressors for clients with cataracts, as stated (Hawari, 2016) which states that the surgical procedure is one of the stressors for individuals who will undergo it. by stressful, threatening and anxiety-increasing events. Surgery is a form of therapy that can pose a threat, both potential and actual, to a person's body, integrity and soul that can trigger anxiety in the client (Long 2016). Stressors that are felt and perceived by individuals are a threat that can cause anxiety, therefore pre cataract surgery clients must always have a good view in dealing with everything. Anxiety is caused by predisposing and precipitation factors. One of the anxiety precipitation factors is the level of knowledge. Knowledge possessed by a person will be able to reduce feelings of anxiety experienced in perceiving something. This knowledge is obtained from information obtained and experiences that have been passed by individuals (Stuart, 2018).

The researcher assumes that knowledge can help patients achieve optimal physiological and psychological responses to surgical/surgical interventions. Patients who have perioperative knowledge can make coping strategies, change behavior, learn new techniques, control emotional responses and prepare for the effects of stress.

#### **4. Conclusion**

Based on the results of the research and discussion that have been described previously, the following conclusions are obtained: Based on the table above, it is known that of the 30 respondents, the majority of good knowledge amounted to 15 people and the minority of good knowledge amounted to 15 people. Based on the table above, it is known that of the 30 respondents, the majority of patients were anxious about pre-cataract surgery, amounting to 18 people and the minority of patients not being anxious about pre-cataract surgery, amounting to 12 people. There is a relationship between knowledge and anxiety levels in preoperative cataract surgery patients at the Eye Polyclinic of RSUD Dr. RM. Djoelham Binjai in 2022.

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