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# The Effect of Medical Information Quality on the Level of Anxiety in Patients before Cataract Operations in the Gambiran Public Hospital Kediri

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## ABSTRACT

The occurrence of cataract blindness can be prevented through surgery at the right time and the right way. Surgery can cause anxiety, ranging from mild anxiety, moderate to severe anxiety. The onset of anxiety can be triggered by internal factors and the environment around the patient, one of the triggers of anxiety is the lack of adequate information received so as to reduce the level of confidence in the health system in the hospital and the declining number of cataract surgeries. The results showed the effect of giving information to the anxiety faced by patients. Pre-surgical preparation is essential to minimize the risk of surgery, because the outcome of the surgery is very dependent on the state assessment and preparation of pre-surgical patients has been done.
**KEYWORD**: Quality, medical information, Anxiety, Pre surgery, cataract.

## INTRODUCTION

Health Sense of Sight is an important requirement to improve human resources in improving the quality of people's lives, in terms of realizing Indonesia intelligent, productive, advanced, independent, and prosperous spiritually. Eyes are the first gate (83% - 85%) the inclusion of information that will be passed to get to the Central Nervous System (brain). se1telah the senses of hearing and other senses. Therefore, the technical term is a window to the world's eyes. [1]

The results of the health survey senses of sight and hearing ¬1996 1993, is the number of blindness in Indonesia reached 1.5%. The main causes of blindness are cataract (0.78%), glaucoma (0.20%), refractive errors (0.14%), and other diseases associated with aging (0.38%). Compared with blindness number of countries in the Southeast Asia Regional, the rate of blindness in Indonesia is the highest (Bangladesh 1%, India 0.7%, Thailand 0.3%). The incidence of cataract is 0.1% (210 thousand people) per year. The large number of cataract patients in Indonesia at this time is directly proportional to the number of elderly population in 2000 is estimated at 15.3 million (7.4% of total population). Therefore, it is understandable that the implementation of eye health program get a big challenge that required a strong effort to improve.

Besides the Indonesian people have a tendency to suffer from cataracts 15 years sooner than patients in the subtropics. Approximately 16% to 22% of cataract surgery patients aged less than 55 years. It is allegedly closely associated with degenerative factors due to nutritional problems. Blindness is not just interfering with the productivity and mobility of the sufferer, but also socio-economic impacts on the environment, families, communities and countries more so in facing the free market.

Cataracts cannot be prevented unless the blindness that is by surgery. Cataract is a degenerative disease, but this time the cataract that has been discovered at a young age (35-40 years) during cataract found in people aged over 55 years so often underestimated by young people. This is due to inadequate nutrition and nutrients your body needs. World Health Organization (WHO) in collaboration with the International Agency For Op Prevention Blindness (IAPB) has planned a global initiative to tackle the problem of eye health and blindness worldwide, a program "Vision 2020 The Right to Sight" (the right to see). [2] [3] in his study of 110 patients with cataract surgery will get anxiety 26.4% , 32.7% ¬ doubt for the outcome of operations, 25.5% feel sad, 4.5% feel upset / angry and 10.9 % feel happy undergoing surgery.

Preparation of pre-surgical is important to minimize the risk of surgery, because the outcome of the surgery is very dependent on the assessment of the person's condition and the preparation of pre-surgery that has been done, the result showed about 80% of all patients undergoing surgery, experiencing anxiety, anxiety before surgery is a concept challenges in the preparation of the patient before surgery. Most patients awaiting elective surgery does little to feel anxiety and rejection response. Anxiety is described as feeling anxious or depressed, which can be linked to abnormal hemodynamic as a consequence of the sympathetic nerves, parasympathetic, and

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endocrine stimulation. Starting from immediately after the decision of a surgical procedure is planned and increased when the patient entered the hospital. Patients may think that surgery is the biggest and the most valuable in life. Anxiety levels of patients affected by many factors. Including age, gender, type of surgery, the previous operating experience, his own personal stress situations [4].

The level of anxiety is a natural reaction to an unexpected situation and potentially confusing in the period before the surgery decision, especially in patients for the first operation. Some studies suggest that high levels of anxiety before surgery can reduce the work of anti-pain after surgery, prolong hospital stays, increase the suffering of patients. Patients with cataracts tend to exhibit excessive anxiety before and after surgery. Lack of information about the operation and also thinking about the outcome of the operation is suspected to be the cause of anxiety and fear them. [3] The anxiety experienced by patients have varying reasons are: anxious face of the operating room and surgical equipment, anxious face body image in the form of deformed limbs , anxiety and fear of death while on an anesthetic, anxious if the operation fails, anxiety problem cost overruns. Some patients who experience severe anxiety was forced to postpone the surgery because the patient was not ready mentally to face surgery. From observations conducted by researchers during the two months of February 1-March 31, 2013 at the Gambiran Public Hospital with ubiquitous phenomenon before undergoing cataract surgery patients who experience anxiety. The anxiety level varies from mild to very severe.

## RESEARCH METHODS

Holistically (3) for educational institutions can theoretically add surgical knowledge, especially knowledge about the factors associated with the level of anxiety in patients before cataract surgery.

This study uses research approaches explanation (explanatory research) with the survey method, the research seeks to explain the influence of the quality of medical information on the patient's anxiety pre cataract surgery. The sample in this study is the proportion of patients who experience anxiety in the cataract eye Poli Gambiran Public Hospital Kediri city, by using quota sampling technique obtaining a sample of 60 respondents.

The independent variables studied were the factors that affect the quality of medical information among other factors furnisher (X1), the factor target (X2) and process factors (X3), the quality of medical information (X4) and the factors that influence anxiety among sexes (X5), education (X6), socioeconomic (X7), knowledge (X8) and family support (X9). The dependent variable studied is the level of anxiety (Y). DBD. Data were analyzed by using Structural Equation Modeling (SEM) by AMOS 6 as well as different test paired sample t test to determine differences in anxiety before and after getting medical information.

## RESEARCH RESULTS

Structural equation modeling analysis of the results of the standardized estimates can be seen in the figure 1.

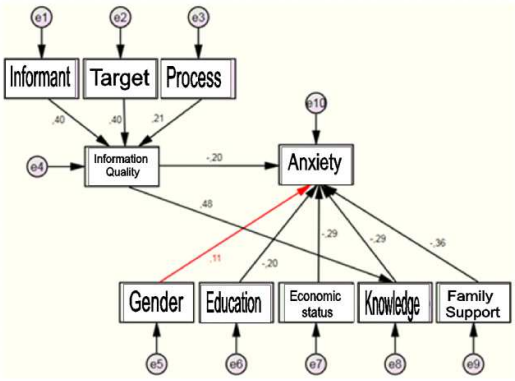


Figure 1. Results of Analysis of Structural Equation Model

Based on the figure 1, it can be seen and the estimated value of the t-value is generated, the estimated value of red illustrates that the t-value generated less than t table (1.96) at the significance level of 5%, which means that the variable is not significant. To see more clearly which variables were significant and insignificant shown in the following table 1.

**Table 1. Value-t and the coefficient on the Structural Model**

| No | Line | Estimates | *t* | *p* | Conclusion |
|---|---|---|---|---|---|
| 1 | Informant → information Quality | 0,31 | 3,90 | 0,000 | Significant |
| 2 | Target → → information Quality | 0,31 | 3,83 | 0,000 | Significant |
| 3 | Process → → information Quality | 0,17 | 2,07 | 0,039 | Significant |
| 4 | Gender → Anxiety | 0,97 | 1,18 | 0,236 | Significant |
| 5 | Education → Anxiety | -1,28 | -2,11 | 0,035 | Not significant |
| 6 | Economic Status→ Anxiety | -0,60 | -3,03 | 0,003 | Significant |
| 7 | Knowledge → Anxiety | -0,75 | -2,67 | 0,008 | Significant |
| 8 | Family Support → Anxiety | -0,17 | -3,71 | 0,000 | Significant |
| 9 | information Quality → Knowledge | 0,35 | 4,20 | 0,000 | Significant |
| 10 | information Quality → Anxiety | -0,37 | -2,02 | 0,042 | Significant |

Note: Significance for the level 5% (with a t Value-value <1.96 or> 1.96)

**Indirect Effect**

To determine the effect or influence of exogenous variables on the endogenous variables can be seen from the indirect effects (Table 2).

**Table 2. Indirect Effect**

| Endogenous variables | Exogenous Variable Anxiety |
|---|---|
| **Informant** | -0,200 |
| **Target Factors** | -0,111 |
| **Process Factors** | -0,196 |
| **Information Quality** | -0,264 |

Based on the table 2 it can be seen how much influence indirectly between exogenous variables on endogenous variables. The smallest are indirect influence on patterns of influence between the factors target medical information about anxiety through the intermediary of the quality of medical information environmental conditions (-0.111). While there's largest indirect effect on patterns of influence between the quality of information about anxiety through the intermediary of knowledge (-0.264).

**1. Effect of Informant Factors on Information Anxiety through Quality Information**

Testing indirect influence among the Informant factors for medical information on the level of anxiety over the condition of the quality of medical information obtained by the estimated value of -0.200. Based on the value of t, the nature of the relationship that is formed is a factor the better the information provider, the better the quality of information that is then followed by the lower level of the patient's anxiety. The test results are presented influence on the figure 2.

Figure 2. Testing Influence Informant Factors on the Level Information Anxiety through Information Quality

2. Factors Influence On The Level Information Target Anxiety Through Quality Information

Testing the indirect influence of the factors target medical information on the level of anxiety over the condition of the quality of medical information obtained by the estimated value of -0.111. Based on the value of t, the nature of the relationship that is formed is a factor the better the target information, the better the quality of information that is then followed by the lower level of the patient's anxiety. The test results are presented influence on the figure 3.

Figure 3. Testing the Effect of Information Target for the Level Information Anxiety through Information Quality

**3. Effect of Information Target Factors for Information Anxiety Through Information Quality**

Testing the indirect effect between medical information delivery process factors on the level of anxiety over the condition of the quality of medical information obtained by the estimated value of -0.196. Based on the value of t, the nature of the relationship that is formed is a factor the better the target information, the better the quality of information that is then followed by the lower level of the patient's anxiety. The test results are presented influence on the figure 4.

Figure 4. Testing of the Information Target Factors for Information Anxiety Levels through Information Quality

**4. Effect of Quality of Medical Information for the Level Anxiety through Knowledge**

Testing indirect influence between the quality of medical information on the level of anxiety through the knowledge obtained by the estimated value of -0.264. Based on the value of t, the nature of the relationship formed is the better the quality of information, the better knowledge of the patient which is then accompanied by the lower level of the patient's anxiety. The test results are presented influence on the figure 5.

Figure 5. Testing the Effect of Information Quality Rate Against Anxiety Through Knowledge

**Patient Anxiety Level Difference**

Testing differences in anxiety levels of patients before and after getting medical information related cataract operation can be seen in the table below.

Table 3. Results of Analysis of Anxiety Level Differences In Cataract Patients in the Gambiran Public Hospital Kediri Before and After Getting Medical Information

| Variables | Mean | S.D | F | Sig. |
|---|---|---|---|---|
| **Anxiety pre-test** | 174,83 | 536,31 | 6,795 | 0.000 |
| **Anxiety post-test** | 160,17 | 594,18 | | |

According to the table 3 above shows that the average score of the anxiety levels of patients before medical information at 174.83, while the average level of anxiety patients after medical information at 160.17. The decrease in anxiety scores are statistically significant, it is based on a significance value of 0.000 is smaller than the critical value $\alpha = 0.05$.

## DISCUSSION

**A. Factors Quality of Medical Information in Cataract Patients in the Gambiran Public Hospital Kediri**

In accordance with the results, medical information quality factor plays an important role in determining the readiness of the patient and family in living action.

In contrast to other areas, the quality of information in the health sector plays a very important, this is because the risk of data and information quality can result in misdiagnosis resulting in medical oversight that ultimately led to malpractice or even death. Has a lot of research about the framework, the list of criteria and approaches to manage and measure the level of quality of information, but the information quality research in the medical field itself is still limited.

Information about cataracts full, clear, not misleading and accountable form of literature books, journals and research are needed medication guide for health workers and can inform the public that wants to self-medication. The importance of the current officers who are to practice according to the standard and not just oriented therapy

patient oriented but also oriented so that officers are required to improve the knowledge, skills and behaviors to interact directly with patients to provide counseling so that the objectives of the treatment of patients is reached.

**B. Level of Anxiety in Patients Before Undergoing Cataract Surgery at the Gambiran Public Hospital Kediri**

Cataract is a disease that requires further treatment to overcome it. One of them is cataract surgery. Cataract surgery is performed to prevent blindness due to cataracts. Before the surgery, the patient pre cataract surgery will usually overwhelm with worry, anxiety, and fear, especially if such a person should undergo a medical procedure that is operations and act as a patient. Various possibilities bad could happen that would be harmful to the patient. So no wonder if patients and their families often show an attitude somewhat exaggerated by the anxiety they are experiencing.

These results indicate that respondents who have mild anxiety is higher when compared with respondents who holds moderate anxiety, and there are some respondents who did not experience anxiety. Signs that often appear on such respondents often wake up at night, increased pulse rate, trembling, fearful of the effects of the action. This is because the response anxious person depends on personal maturity, an understanding in the face of challenge, self-esteem, and coping mechanisms used and also the self-defense mechanism which is used to treat anxiety, among others by pressing conflicts, impulses that can not be accepted by consciously , do not want to think about things that are less pleasant himself (suppression).

**C. Factors That Can Cause Anxiety for Patients before Undergoing Cataract Surgery in the Gambiran Public Hospital Kediri**

Based on the model analysis shows that the factors that influence anxiety about the occurrence of cataracts is gender, economic status, knowledge and family support.

Many factors affect the patient's anxiety, according to [5] the mechanism of anxiety that psycho neuro-immunological or psycho-neuro-endocrinologist. However, not all people who experience psychosocial stressors will experience anxiety disorders this depends on the structure of the personality development of a person that age, level of education, experience, gender, social support from family, friends, and society. Reinforced with regard to the theory of anxiety in men and women by [6] who wrote in his book that in general an adult male has a strong mentality to something that is considered a threat to himself than women. Men have more knowledge and greater insight than women, because men are more interacting with the external environment, while most women just stay at home and live his activities as a housewife, so that the level of knowledge or transfer the information obtained is limited on prevention disease. Age shows the size of a growth and development of an individual. Age correlates with the experience; the experience is correlated with the knowledge, understanding and views to a disease or event that would shape perceptions and attitudes. Maturity in the thought process in individuals aged adults are enabled to use good coping mechanisms than the age groups of children, found that most of the age groups of children who have medical problems are more likely to experience severe anxiety response than adult age groups. This condition shows the response of severe anxiety can tend to be found on-educated respondents low due to their understanding of the medical problems that create the perception that scary for them to respond to medical problems.

Past experience of the disease in both positive and negatively affect the development of coping skills to use. A person's success in the past can help individuals to develop coping skills to use, otherwise failure or emotional reaction causes a person to use maladaptive coping against a particular stressor. The results of this study are supported by [7] which states that the function of affective family is a support psycho social family to its members, , so that family members feel comfortable and loved but if a critical function is inadequate then the individual will feel alienated and not expected again by the family.

This shows that not all respondents who have a high knowledge does not experience anxiety as well as respondents who have knowledge of pre-surgery less will experience severe anxiety, this may depend on the perception or acceptance of the respondent itself against the operation to be executable, self-defense mechanisms and coping mechanisms used. In some people who know it better preoperative information will only increase anxiety, and contrary to the respondents who knew pre-surgical information it makes it a relaxing face minimal operations.

**D. Effect of giving Medical Information for Patients on The Level Anxiety before Undergoing Cataract Surgery the Gambiran Public Hospital Kediri**

The results showed the effect of giving information to the anxiety faced by patients. Preparation of pre-surgical is important to minimize the risk of surgery, because the outcome of the surgery is very dependent on the assessment of the person's condition and the preparation of pre-surgery has been done, the majority of all patients

undergoing surgery, experiencing anxiety, anxiety before surgery is a concept challenges in patient preparation before operation. Most patients awaiting elective surgery does little to feel anxiety and rejection response. Anxiety is described as feeling anxious or depressed, which can be linked to abnormal hemodynamic as a consequence of the sympathetic nerves, parasympathetic, and endocrine stimulation. Starting from immediately after the decision of a surgical procedure is planned and increased when the patient entered the hospital. Patients may think that surgery is the biggest and the most valuable in life. Anxiety levels of patients affected by many factors. Including age, gender, type of surgery, the previous operating experience, his own personal stress situations [8] Most people will feel anxious when adjudged to have surgery even though it was only a small operation. For according to common understanding of the operation means any body part that will be slashed, opened up into it. Therefore, some people will feel anxious when they have to wait for the medical measures.

The anxiety that occurs can be suppressed by the provision of information, for the provision of information affects thinking processes in patients. Therapeutic procedure will give an anxiety reaction that appears as a response to the anticipation of a patient's experience can be considered as a threat to his life. If the patient has excessive anxiety, officers need to provide information that helps get rid of that anxiety. Nurses need to improve the provision of information to patients preoperatively by providing information that includes experience during the preoperative, intra operative and postoperative so it can reduce patient anxiety.

Surgery can cause a different response for each patient it is justified because of health status, condition and prognosis of acute or chronic diseases, as well as the experience of surgery patients also differ. so that the patient's response is also different and can be demonstrated in several ways, namely: anxious, angry, confused, refused, and asked many questions. Doctors and nurses can do a lot to optimize the fulfillment of the needs of patients with the necessary information. Patients have the right to know more about the nursing care provided by nurses as health professionals. Doctors should give patients information about things that are not, or not yet known when the patient asked. Provide the necessary information as a way to build a trusting relationship with the patient thereby increasing patient knowledge that is useful for patients in decision making.

## CONCLUSIONS

Based on the analysis, the conclusions in this study are as follows:

1. In accordance with the results of medical information quality factor discount important role in determining the readiness of the patient and family in living action. Health care (healthcare) is the domain of the most suitable to be applied in ubiquitous technology, this is because there is no other domain that requires more speed and accuracy of information, and does not depend on space and time domain in addition to health services.

2. Cataract disease is a disease that requires further treatment to overcome it. One of them is a cataract surgery, leading to the emergence of anxiety in patients that may be causing interference on the therapeutic process.

3. Based on the model analysis shows that the factors that influence anxiety about the occurrence of cataracts is gender, economic status, knowledge and family support. Anxiety appears depends on perception or acceptance of the respondent itself against the operation to be executable, self-defense mechanisms and coping mechanisms used.

4. The results showed the effect of giving information to the anxiety faced by patients. Pre-surgical preparation is essential to minimize the risk of surgery, because the outcome of the surgery is very dependent on the state assessment and preparation of pre-surgical patients who have done

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