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A STUDY ON DECISION-MAKING FOR CATARACT SURGERY AND PREFERENCE OF IOLS IN AN EYE HOSPITAL

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ABSTRACT:

Purpose: The study aims to evaluate the decision-making for cataract surgery and IOL preference. **Methods**: This is exploratory research that aims to find the factors affecting the decision-making process for the uptake of cataract surgery and the preference for intra-ocular lenses. A convenience random sampling method is used to collect data. An online cross-sectional study was conducted in a reputed hospital. The queries were developed in a quiz format using google forms. **Results:** A total of two hundred and fifty-one data were collected from the cataract patients who have consented to participate in the study. The mean age of cataract patients who participated in the study was 61.84 ±10.12 years with a median of 63 years. While the minimum age of the participant was 18 years and the maximum age was 86 years. The study shows that the maximum percentage of primary decision-makers of respondents are son/daughter (53.4%), and the minimum percentage of primary decision-maker of respondents are son-in-law/daughter-in-law (2.4%). From the study,97.9% of patients were clear about the information provided regarding post-operative care such as drops application, food, routine work, sleeping pattern, and bathing. Future **scope:** The findings are also expected to pave the way for future research work.

Keywords: Cataract, Patient-centred, Decision-making, Gender, Intra-ocular lens, Communication.

I.INTRODUCTION:

Cataract surgery is one of the most common surgical procedures performed around the globe, with nearly 20 million procedures performed each year. Cataracts affect people of all ages, but they are more prevalent in older populations, with prevalence increasing with age. In recent years, cataract surgery has become an effective and safe method for restoring vision in people who have cataracts due to technological advancements and the availability of intraocular lenses (IOLs).[1]

The crystalline lenses are transparent and biconvex structures in the human eye, which function like a camera lens. Cataracts are lens abnormalities characterized by reduced transparency and increased cloudiness. The main cause of irreversible visual impairment and blindness in the world is cataracts. [2]

Crystalline are the major proteins that make lenses and surfaces, which have an important role to play in their Refractive Activity. The main mechanisms underlying cataract development are modification, aggregation, and precipitation of crystals. There is no method of preventing this process so far. Most cataracts are caused by age-related degeneration, but they may also be secondary to trauma or as a result of another disease. The incidence of cataracts in children is rare.[3]

The crystalline lens of your eye becomes clouded, and cataract surgery removes it and replaces it with artificial lenses. It is

the standard treatment, and ophthalmologists predominate among eye surgeons who specialised in treating the eyes.[4]

A major advancement in cataract surgery has resulted from the use of intraocular lenses, one of the most common surgical techniques in the world. Following the removal of the natural lens, intraocular lenses must be inserted into the eye to treat many kinds of difficulties with vision, including presbyopia, astigmatism, near-sightedness, and farsightedness.[5]

A study conducted by M.M Bakker et.al in 2010 examines gender and cultural differences among patients in Spain and the Netherlands as regards attitudes towards cataract surgery. The study shows that, in both countries, women's attitudes towards the procedure differ more from those of men and cultural factors are a factor influencing patients' views. These gender and cultural differences should be noted by healthcare professionals in their consultation with patients undergoing cataract surgery, according to the study.[6]

In patients with traditionally more limited access to health care, such as women or people who do not read, the article published by Newman Casey et al. shows that both better knowledge and advice on cataract surgery have reduced conflict of decision among these patients. To further reduce the global burden, it may be useful to increase the use of high-quality Counselling. Other forms of visual impairment, include cataracts.[7]

Even though several studies are being conducted regarding factors affecting decision-making processes for cataract procedures, little research is currently undertaken on gender influence and different factors relating to choosing of IOLs. The purpose of the study is therefore to determine whether gender and other related factors have an impact in determining which IOLs should be selected for cataract surgery. The study will be conducted in a hospital setting, and data will be collected from patients who have undergone cataract surgery. The study will also explore the reasons for the patients' choices and the factors that influenced their decisions.[8]

The main objectives of the study are

- To find the factors affecting the decision-making for cataract surgery
- To find the association between the gender and decision-making processes for cataract surgery and preference for IOLS
- To find the effectiveness of Counselling in pre-operative and post-operative Counselling.

II.REVIEW OF LITERATURE:

Cizmecioglu OM et.al (2020) examine the impact of health literacy, numeracy, and risk attitude on decision-making in patients undergoing cataract surgery. In this study, higher levels of uncertainty and worry about the decision to have cataract surgery were reported in patients with low health literacy and numeracy scores. [9]

Kawashima M et.al (2020) examined the factors which affect the decision-making process of patients diagnosed with cataracts in Japan. The study showed that in most cases patients are the primary decision-makers, but family members and medical professionals have also played an important role. Several factors affecting decision-making, including age, gender, educational levels, income, and severity of cataracts have been identified in the study. [10]

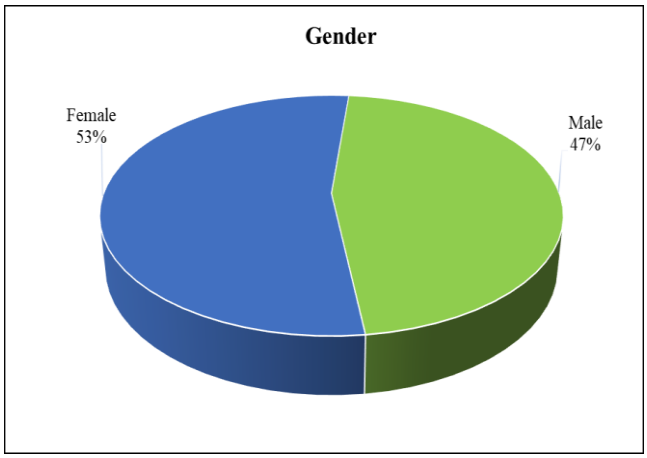
Theodossiades J et al (2018) investigated into gender differences in education and advice given to patients undergoing cataract surgery. The study finds that women are more likely to ask questions and seek more information during Counselling sessions, while men are more likely to express concerns about the procedure and its potential complications [11].

Saluja G et al. (2017) evaluated the efficiency of preoperative Counselling in cataract patients and showed that there was a positive post-op outcome for those treated with Preoperative Counselling, as opposed to not doing so. The study highlights the importance of effective Counselling in improving patient

satisfaction and reducing anxiety and stress related to cataract surgery. [12]

III.METHODOLOGY

This is descriptive research that aims to find the factors affecting the decision-making process for the uptake of cataract surgery and the preference for intra-ocular lenses. A convenience random sampling method is used to collect data. An online cross-sectional study was conducted in a reputed hospital. The queries were developed in a quiz format using google forms. The questionnaire comprised 30 questions which includes demographic factors of the patients, decision-making factors of the patients, and questions on the effectiveness of pre-operative and post-operative care.



A. INCLUSION CRITERIA:

- All patients 18 years and above are included in the study.
- Patients who are willing to participate after oral consent.
- Patients who decided to undergo cataract surgery are included in the study.

B. EXCLUSION CRITERIA:

- Patients below 18 years are excluded from the study.
- Other surgical patients are not included in the study.

IV.ANALYSIS

Chart I- shows the profile of respondents in terms of gender

Chart I highlight the profile of respondents in terms of gender. From the statistics shown in the pie chart, it is indicated that 53% of the data is collected from females whereas 47% of the data is collected from males.

Chart II shows the primary decision-maker of the respondents

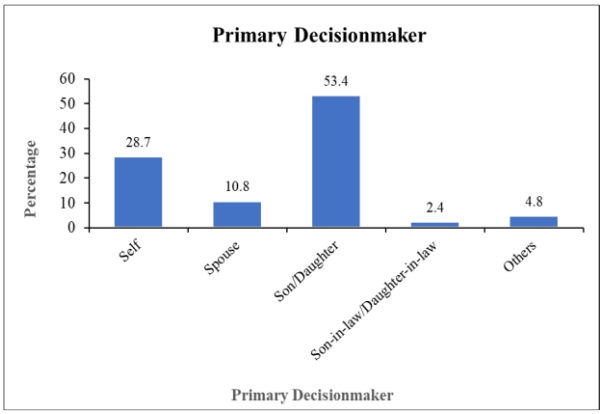


Chart II visually highlights the values of the primary decisionmaker of the respondents who participated in the study. The bar chart implies that 53.4% of the primary decision-maker of respondents are son/daughter, 28.7% of respondents have responded that the decision was self-made,10.8% of the primary decision maker of respondents are made by the spouse as most of the respondents are financially dependent on their partner,4.8% respondents have responded that the decision was made by other family members like niece, nephew, brother-in-law, grandson, granddaughter, etc., the minimum percentage of primary decisionmaker of the respondents are son-in-law/daughter-in-law (2.4%).

Chart III- shows the age distribution of the respondents

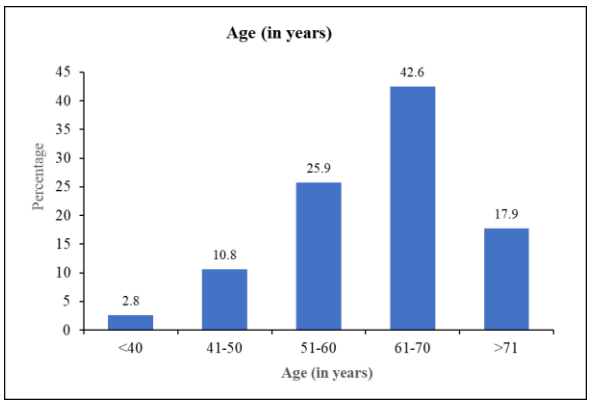
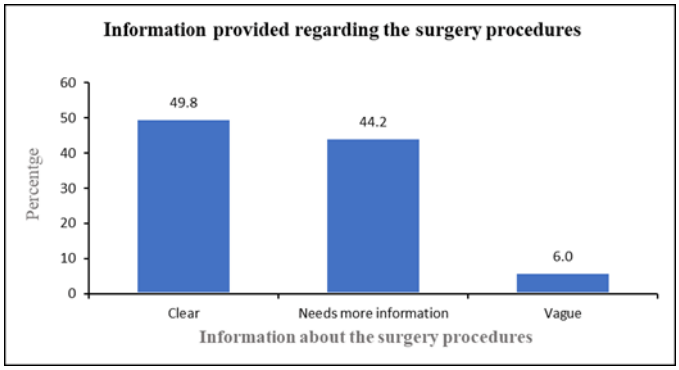


Chart III highlights the age distribution of cataract patients in this study. Based on these results, it shows that among the cataract patients in the study, the age group with the highest frequency was 61–70 years (42.6%), the second highest frequency was 51-60 years (25.9%) and the age group with the lowest frequency was <40 years (2.8%). As the common age of cataract occurrence is above the age of 50 years

Chart IV- shows the information provided regarding the surgical procedure in the pre-operative care



From chart IV, 49.8% of patients were clear about the information given on the surgery procedure, whereas 44.2% of patients responded that they need more information regarding the surgery procedure and 6% of patients have responded that the information provided on the surgery procedure were vague.

Table I-showing tha association between gender and factors.

CHI-SQUARE TEST		
S.NO	FACTORS	p-VALUE
1	Educational Qualification of the respondents	<0.001
2	Individual Income of the respondents	
3	Occupation of the respondents	
4	Response to the question"Do you have a medical insurance?"	
5	Primary decision-maker of the respondents	

In the following interpretation, H denotes “Hypothesis”

H0: There is no association between the gender and the factors such as educational qualification of the respondent, Individual income of the respondent, Occupation of the respondent, response to the question "Do you have medical insurance?”, primary decision-maker of the respondent.

H1: There is an association between gender and factors such as educational qualification of the respondent, Individual income of the respondent, Occupation of the respondent, response to the question "Do you have medical insurance?”, and primary decision-maker of the respondent.

From the above table, the significant value is <.001, which is less than .05, hence we reject H0 and accept H1. Thus, we prove that there is an association between gender and the factors such as educational qualification of the respondent, Individual income of the respondent, Occupation of the respondent, response to the question "Do you have medical insurance?” primary decision-maker of the respondent

MAJOR FINDINGS

1. A total of two hundred and fifty-one data were collected from the cataract patients who have consented to participate in the study.
2. 50% of the data was collected from pre-operative patients and 50% of the data was collected from post-operative patients

3. The data was collected from both the attendant and the patient.55% of the data is collected from the attendant whereas 45% of the data is collected from the patient. (Data acquired from the attendants implies that the patient faced challenges in participating in the study. Highly observed challenges were the pain and discomfort experienced by patients after cataract surgery and the educational qualifications of the respondents)
4. The mean age of cataract patients who participated in the study was 61.84 ±10.12 years with a median of 63 years. While the minimum age of the participant was 18 years and the maximum age was 86 years.
5. From the study, it is found that 53% of the data is collected from females whereas 47% of the data is collected from males.
6. From the study, it is concluded that the highest percentage of subjects are educated at the school level (51.4%) and the second highest percentage of subjects are illiterate (28.3%) and the lowest percentage of subjects are post-graduates (0.8%).
7. The study shows that the maximum percentage of respondent's individual income is <10,000 (in rupees) (57.8%) and family income is between 10,001-25000 (in rupees) (32.7%) and the minimum percentage of respondent's individual income is >50,000 (in rupees) (4.0%) and family income is >50,000 (16.7%).
8. The study shows that the maximum percentage of primary decision-makers of respondents are son/daughter (53.4%), and the minimum percentage of primary decision-maker of respondents are son-in-law/daughter-in-law (2.4%).
9. The mean rate of surgery package chosen (in rupees) by the respondents who participated in the study is 21,003±10,046.44 with a median of 20,000 (in rupees). While the minimum rate of surgery package chosen by the respondents in the study is 7,000 (in rupees) and the rate of surgery package chosen by the respondents in the study is 74,000 (in rupees).
10. From the study, it is highlighted that a higher percentage of subjects have responded no (75%) to the question “Do you have medical insurance? “And the lowest percentage of subjects have responded yes (25%) to the question “Do you have medical insurance?”.
11. From the study, it is evident that the maximum percentage of surgery has been advised to the patient last week (41%) and the minimum percentage of surgery has been advised to the patients within the last 6 months (3.6%).
12. The data collected from the subject's responses to the question "Was the information given by the Counsellor clear and easy to understand?”, it is highlighted that the subjects have responded yes at a maximum percentage (92%) and no at a minimum percentage (8%).
13. From the study,97.9% of patients were clear about the information provided regarding post-operative care such as drops application, food, routine work, sleeping pattern, and bathing.

SUGGESTIONS:

1. From the study, it is found that the decision-making process for cataract surgery and preference of IOLS depends on different factors such as Individual income, educational qualification, occupation of the participants, medical insurance, and primary decision maker of the family.
2. From the study, it is evident that 93.6% is clear about the information given regarding the cost of surgery whereas other information like surgery procedures, insurance details, benefits, and variety of lenses were explained vaguely or the patient requires more information.
3. In order to avoid the lack of information provided to patients following measures can be initialized:

- Increase in the number of counselors to decrease the waiting time of patients and to provide more information regarding cataract surgery and IOLS
- Frequent training for counselors to enhance their communication skills and work ethics
- Enhance better coordination between the insurance department and counseling department

CONCLUSION:

A hospital-based study showed the decision-making process in cataract surgery and the preference for IOLs. The study was able to demonstrate significant associations with the factors and gender of respondents. The study concluded that better results and higher satisfaction of patients can be achieved by an approach to cataract surgery based on personal preferences and variables, with the aim of improving outcomes and making it easier for patients. Further studies in this area can reveal additional factors that may have an impact on patient preferences and lead to a more targeted approach for cataract counseling.

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