

Original article

Impact of Informed Consent on Decision Making for Cataract Surgery at Teaching Hospital University of Lahore

*Muhammad Arshad¹, Muhammad Asad Bilal¹, Muhammad Ayoub¹, Anas Khan¹

¹ Department of Health Professional Technologies, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan

* Correspondence: arshadmissan00@gmail.com

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ABSTRACT

Background: Cataract is the leading cause of reversible blindness worldwide, and informed consent is essential for ensuring patient understanding, promoting shared decision-making, and improving satisfaction with surgical care. However, evidence regarding patients' perceptions of the informed consent process in cataract surgery remains limited in Pakistan. **Objective:** To evaluate the association between informed consent and decision-making among patients undergoing cataract surgery at a tertiary care teaching hospital. **Methods:** A hospital-based descriptive cross-sectional study was conducted in the Department of Ophthalmology, Teaching Hospital, University of Lahore, Pakistan, between January 2025 to June 2025. A total of 115 adult patients scheduled for cataract surgery were recruited using consecutive sampling. Data were collected through face-to-face interviews using a structured questionnaire assessing demographic characteristics, knowledge of cataract surgery, physician counselling, trust in the treating ophthalmologist, satisfaction with preoperative information, and confidence in treatment decisions. Data were analyzed using SPSS version 27. Descriptive statistics were reported as frequencies and percentages. **Results:** All 115 eligible participants completed the survey (response rate: 100%). Most participants correctly identified cataract as the cause of their visual impairment (64.3%) and understood that untreated cataract could result in significant vision loss (70.4%). Ophthalmologists were the primary source of information for 62.6% of participants, while 67.0% reported receiving an adequate explanation of the surgical procedure before consent. High levels of trust in the treating ophthalmologist (66.1%), satisfaction with preoperative counselling (60.0%), and confidence in treatment decisions (63.5%) were observed. Furthermore, 63.5% reported that physician counselling had a major influence on their decision to undergo cataract surgery, and 53.0% indicated that they would proceed with surgery despite awareness of potential complications. **Conclusion:** Most patients reported positive experiences with the informed consent process, including satisfactory counselling, high physician trust, and confidence in treatment decisions. Nevertheless, gaps in patients' understanding of surgical risks highlight the need to strengthen preoperative counselling and standardize informed consent practices to support informed decision-making in cataract surgery. **Keywords:** Cataract surgery; informed consent; shared decision-making; patient education; physician–patient communication; ophthalmology; Pakistan.

EDITORIAL INFORMATION

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Ethical Approval: Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan.

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INTRODUCTION

Cataract remains the leading cause of reversible blindness worldwide and continues to represent a major public health challenge despite the availability of safe, effective, and highly successful surgical treatment. According to recent global estimates, cataract accounts for a substantial proportion of avoidable visual impairment, particularly among older adults, and its burden is expected to increase as populations continue to age (1–3). Visual impairment caused by cataract negatively affects independence, mobility, daily functioning, mental well-being, and overall quality of life while increasing the risk of falls, social isolation, and reduced productivity. These consequences are especially pronounced in low- and middle-income countries (LMICs), where delayed presentation, inadequate awareness, socioeconomic barriers, and limited access to ophthalmic services frequently contribute to preventable blindness (1–4).

Cataract surgery is among the most commonly performed surgical procedures worldwide and has consistently demonstrated excellent visual and functional outcomes when performed under appropriate clinical conditions (4). However, successful cataract management depends not only on surgical expertise but also on patients' understanding of their disease, realistic expectations regarding treatment outcomes, and willingness to participate actively in healthcare decisions. Contemporary healthcare increasingly emphasizes patient-centered care, in which patients are encouraged to become informed partners in decision-making rather than passive recipients of medical interventions. Effective communication between ophthalmologists and patients therefore represents an essential component of high-quality cataract care because it facilitates appropriate expectations, strengthens therapeutic relationships, and improves adherence to recommended treatment (5).

Informed consent is a fundamental ethical, legal, and clinical process through which healthcare professionals provide patients with understandable information regarding their diagnosis, proposed intervention, anticipated benefits, potential risks, available alternatives, and the possible consequences of declining treatment (6,7). Beyond obtaining written authorization, informed consent is intended to support autonomous decision-making by enabling patients to make voluntary choices that are consistent with their values, preferences, and expectations. Within elective procedures such as cataract surgery, where patients generally have adequate time to consider treatment options, the quality of physician–patient communication assumes particular importance because informed discussions may reduce anxiety, strengthen trust, improve treatment satisfaction, and facilitate shared decision-making (5–8).

Previous studies have consistently demonstrated that effective preoperative counselling improves patients' understanding of cataract surgery and increases confidence in treatment decisions, whereas inadequate communication may result in misconceptions regarding surgical risks, unrealistic expectations, and reluctance to undergo surgery (6,8,9). Systematic reviews have further shown that many patients who complete written consent forms continue to have limited comprehension of important procedural information, indicating that informed consent should be regarded as a continuous communication process rather than a single administrative event (6,12). Similar findings have been reported across ophthalmology, where structured counselling and patient-centred communication are associated with greater knowledge retention, improved trust in healthcare providers, and higher satisfaction with surgical care (9,12,21).

Despite these observations, important contextual challenges remain in LMICs, including Pakistan, where variations in educational attainment, health literacy, socioeconomic status, language, and cultural norms frequently influence patients' understanding of medical information and participation in treatment decisions (13,14). In many healthcare settings, informed consent continues to focus primarily on documentation rather than meaningful communication, and discussions regarding surgical risks, expected outcomes, and alternative treatment options are often brief or inconsistent. Consequently, patients may agree to surgery without fully understanding the procedure or participating actively in shared decision-making (14–17).

Although several studies have evaluated patients' awareness of informed consent or overall satisfaction with surgical counselling, comparatively little evidence has specifically examined how the informed consent process influences confidence, trust in physicians, and decision-making among patients undergoing cataract surgery within the Pakistani healthcare system (13–17). Furthermore, most available local studies have concentrated on general surgical populations rather than ophthalmic patients, limiting the availability of evidence to guide patient-centered improvements in cataract services. Addressing this knowledge gap is important because understanding the factors that influence patients' willingness to undergo cataract surgery may assist clinicians in developing more effective counselling strategies and improving the overall quality of ophthalmic care.

Therefore, the present study aimed to evaluate the impact of informed consent on decision-making among patients undergoing cataract surgery at the Teaching Hospital, The University of Lahore, Pakistan. Specifically, the study assessed patients' understanding of cataract surgery, perceptions of preoperative counselling, trust in the treating ophthalmologist, satisfaction with information provided, and the association between the informed consent process and patients' confidence and willingness to proceed with cataract surgery.

MATERIALS AND METHODS

A hospital-based descriptive cross-sectional study was conducted at the Department of Ophthalmology, Teaching Hospital, The University of Lahore, Pakistan, between January 2025 to June 2025 to evaluate the association between informed consent and patients' decision-making regarding cataract surgery. The study was reported in accordance with the STROBE guidelines.

Adult patients (≥ 25 years) with clinically significant cataract scheduled for elective surgery were recruited consecutively during routine preoperative assessment. Patients with cognitive impairment, active ocular infection, retinal detachment, congenital cataract, or inability to complete the interview were excluded. The sample size of 115 participants was calculated using the WHO sample size calculator with a 95% confidence level, 82.3% anticipated proportion, and 7% margin of error. Written informed consent was obtained from all participants before enrolment.

Data were collected using a structured questionnaire adapted from previously published studies on informed consent and patient decision-making. The questionnaire included demographic characteristics, preoperative knowledge of cataract surgery, patient–physician relationship, satisfaction with counselling, and the perceived influence of informed consent on treatment decisions. Face-to-face interviews were conducted by the principal investigator in a private setting, and completed questionnaires were reviewed for completeness before data entry. The primary outcome was the perceived influence of informed consent on the decision to undergo cataract surgery. Secondary outcomes included patients' knowledge of cataract surgery, awareness of surgical risks, trust in the treating ophthalmologist, satisfaction with preoperative counselling, and confidence in treatment decisions. Data were analyzed using IBM SPSS Statistics version 27.0 (IBM Corp., Armonk, NY, USA). Categorical variables were summarized as frequencies and percentages, while continuous variables, where applicable, were presented as mean $\pm$ standard deviation. Ethical approval was obtained from the Ethical Review Committee of the Faculty of Allied Health Sciences, The University of Lahore (Ref. No.: DRC/DHPT021/05/25), and administrative permission was obtained from the study site. Participation was voluntary, all information was anonymized before analysis, and the study was conducted in accordance with the Declaration of Helsinki.

RESULTS

A total of 115 patients scheduled to undergo cataract surgery were enrolled in the study. All eligible participants completed the questionnaire, resulting in a 100% response rate. The results describe the demographic characteristics of the participants, their preoperative knowledge regarding cataract surgery, and the influence of physician counselling and informed consent on treatment decision-making.

The baseline demographic characteristics of the study participants are presented in Table 1. The study population predominantly comprised older adults, with the highest proportion belonging to the 61–70-year age group (40.0%), followed by participants aged over 70 years (25.2%). Collectively, nearly two-thirds of the participants were older than 60 years, reflecting the age-related occurrence of cataract. Male participants constituted 53.9% of the study population, while females accounted for 46.1%, indicating a relatively balanced gender distribution. Regarding occupation, retired individuals represented the largest proportion (33.0%), followed by housewives (29.6%) and laborers (18.3%), whereas office workers and individuals from other occupations comprised smaller proportions of the study sample.

Table 1. Baseline Demographic Characteristics of Study Participants

Characteristic	Category	n	%
Age (years)	40–50	12	10.4
	51–60	28	24.3
	61–70	46	40.0
	>70	29	25.2
Gender	Male	62	53.9
	Female	53	46.1
Occupation	Retired	38	33.0
	Housewife	34	29.6
	Labourer	21	18.3
	Office worker	12	10.4

Characteristic	Category	n	%
Characteristic Age (years)	Other	10	8.7
	Category	n	%
	40–50	12	10.4
	51–60	28	24.3
	61–70	46	40.0
Gender	>70	29	25.2
	Male	62	53.9
	Female	53	46.1
Occupation	Retired	38	33.0
	Housewife	34	29.6
	Labourer	21	18.3
	Office worker	12	10.4
	Other	10	8.7

Participants' preoperative knowledge regarding cataract disease and the planned surgical procedure is summarized in Table 2. More than half of the respondents (59.1%) reported discussing their eye condition with a physician before attending the hospital, and 62.6% identified ophthalmologists as their primary source of information regarding cataract surgery. Nearly two-thirds (64.3%) correctly recognized cataract as the cause of their visual impairment, while 70.4% understood that untreated cataract could eventually lead to significant vision loss. Although most participants (67.0%) reported receiving an adequate explanation of the surgical procedure before providing consent, almost one-third considered the explanation insufficient or reported receiving no explanation. Similarly, 60.0% were aware of possible surgical complications, whereas more than one-third remained unaware or uncertain regarding potential risks associated with the procedure.

Table 2. Preoperative Knowledge and Awareness Regarding Cataract Surgery

Variable	Category	n	%
Discussed eye condition with physician before hospital visit	Yes	68	59.1
	No	32	27.8
	Don't know	15	13.0
Primary source of information	Ophthalmologist	72	62.6
	Friends	18	15.7
	Internet	15	13.0
	Other	10	8.7
	Cataract	74	64.3
Understanding of diagnosis	Decreased vision	26	22.6
	Glaucoma	5	4.3
	Don't know	10	8.7
	Very much	36	31.3
Concern regarding surgery	Much	41	35.7
	Not at all	38	33.0
	Yes	81	70.4
Aware untreated cataract may cause vision loss	No	12	10.4
	Don't know	22	19.1
	Yes	77	67.0
Doctor adequately explained procedure	Yes, but insufficient	22	19.1
	No	16	13.9
	Yes	69	60.0
Aware of possible surgical complications	No	20	17.4
	Don't know	26	22.6
	Yes	69	60.0

These findings indicate that the majority of patients had a satisfactory understanding of cataract surgery and its consequences before the operation. Nevertheless, important knowledge gaps persisted regarding procedural risks and the adequacy of counselling, suggesting opportunities to further strengthen patient education during the preoperative period.

Patients' perceptions of physician communication and the influence of informed consent on treatment decisions are presented in Table 3. Approximately two-thirds of participants (66.1%) reported a high level of trust in their treating ophthalmologist, while 60.0% expressed high satisfaction with the information provided before surgery. Furthermore, 63.5% indicated that the physician's explanation had

a major influence on their decision to undergo cataract surgery. Following completion of the informed consent process, an identical proportion (63.5%) reported confidence in their final treatment decision. Despite being informed about potential surgical complications, more than half of the participants (53.0%) stated that they would still proceed with surgery, whereas 19.1% reported that their decision would depend on the severity of possible complications. Smaller proportions indicated that they would decline surgery or remained undecided.

Table 3. Patient–Physician Relationship, Satisfaction with Counselling, and Influence on Decision-Making

Variable	Category	n	%
Trust in treating ophthalmologist	High	76	66.1
	Moderate	25	21.7
	Low	14	12.2
Satisfaction with preoperative information	Very satisfied	69	60.0
	Partially satisfied	31	27.0
	Dissatisfied	10	8.7
	Uncertain	5	4.3
Doctor's explanation influenced decision	High influence	73	63.5
	Moderate influence	24	20.9
	No influence	18	15.7
Would undergo surgery despite possible complications	Yes	61	53.0
	Depends on severity	22	19.1
	No	18	15.7
	Undecided	14	12.2
Confidence in final treatment decision	Confident	73	63.5
	Not confident	24	20.9
	Uncertain	18	15.7

Overall, the findings demonstrate that participants generally reported favourable perceptions of physician communication and the informed consent process. Higher levels of trust in the treating ophthalmologist, satisfaction with preoperative counselling, and confidence in treatment decisions were frequently reported, while physician counselling was perceived to play an important role in patients' willingness to proceed with cataract surgery. However, a proportion of participants continued to report uncertainty or limited influence of counselling, indicating that further improvements in the consistency and comprehensiveness of the informed consent process may enhance patient understanding and engagement in surgical decision.

DISCUSSION

The present study evaluated the association between informed consent and decision-making among patients undergoing cataract surgery at a tertiary care teaching hospital in Pakistan. Overall, the findings indicate that most participants reported satisfactory preoperative knowledge, a high level of trust in their treating ophthalmologist, and positive perceptions of physician counselling. Furthermore, nearly two-thirds of the participants stated that the information provided during the informed consent process substantially influenced their decision to undergo cataract surgery and increased their confidence in the final treatment decision. These findings suggest that effective communication during the informed consent process is an important component of patient-centered ophthalmic care.

An important finding of the present study was that ophthalmologists were the primary source of information regarding cataract surgery, and most participants correctly identified cataract as the cause of their visual impairment. In addition, a large proportion understood that untreated cataract could result in progressive vision loss. These findings indicate an overall satisfactory level of patient awareness before surgery, although deficiencies remained regarding knowledge of potential surgical complications and the adequacy of counselling. Similar observations have been reported in previous studies, which demonstrated that while patients generally understand the expected benefits of cataract surgery, detailed knowledge of procedural risks, alternative treatment options, and postoperative expectations often remains limited despite completion of written consent forms (6,12,21). These findings reinforce the concept that informed consent should be viewed as a continuous educational process rather than a single administrative requirement.

The present study also demonstrated favorable patient–physician relationships, with approximately two-thirds of participants reporting high levels of trust in their ophthalmologist and satisfaction with the information received before surgery. Effective physician communication has consistently been recognized as a key determinant of patient satisfaction, treatment adherence, and shared decision-making (5,8). Previous studies from Pakistan similarly reported that patients rely predominantly on verbal explanations provided by physicians, while written consent documents alone contribute relatively little to patient understanding (15–17). The current findings support these observations and emphasize the importance of clear, patient-centered communication throughout the preoperative counselling process.

The influence of physician counselling on surgical decision-making represented another important finding of this study. Nearly two-thirds of participants reported that discussions with their ophthalmologist had a major influence on their decision to proceed with cataract surgery, and a similar proportion expressed confidence in their final treatment decision following counselling. More than half of the participants also indicated that they would undergo surgery despite being aware of potential complications. These observations are consistent with studies from other countries, which have demonstrated that structured counselling and shared decision-making improve patient confidence, reduce uncertainty, and promote informed participation in treatment decisions (9,18–24). Although the present study did not evaluate causal relationships, the findings suggest that comprehensive preoperative counselling may contribute to greater patient engagement during the decision-making process.

From a clinical perspective, these findings have important implications for ophthalmic practice. Cataract surgery is one of the most effective interventions for restoring vision; however, successful treatment depends not only on surgical expertise but also on patients' understanding of the procedure and their confidence in the recommended management. Standardized counselling protocols, simplified educational materials, and opportunities for patients to ask questions may further improve comprehension, address misconceptions, and strengthen physician–patient relationships. Such approaches may be particularly valuable in low- and middle-income countries, where differences in health literacy, educational attainment, and cultural beliefs may influence understanding of informed consent and acceptance of surgical treatment (13,14).

The present study has several strengths. It evaluated multiple dimensions of the informed consent process, including patient knowledge, physician trust, satisfaction with counselling, confidence in treatment decisions, and willingness to undergo surgery. Data were collected prospectively during the preoperative period using a structured questionnaire, providing insight into patients' experiences immediately before surgery. In addition, the study contributes locally relevant evidence regarding informed consent in cataract surgery, an area that remains relatively underexplored in Pakistan.

Several limitations should also be considered. The study was conducted at a single tertiary care center using a descriptive cross-sectional design, which may limit the generalizability of the findings to other healthcare settings. The use of consecutive sampling and self-reported questionnaire responses may have introduced selection and response bias. Furthermore, only descriptive analyses were performed; therefore, independent predictors of patient confidence or decision-making could not be evaluated. Future multicenter studies incorporating inferential analyses and validated patient-reported outcome measures are warranted to better understand the factors influencing informed consent and shared decision-making in ophthalmic practice.

Overall, the findings demonstrate that patients who reported receiving comprehensive preoperative counselling also reported higher levels of trust, satisfaction, and confidence in their treatment decisions. Strengthening communication strategies and standardizing informed consent practices may further enhance patient-centered care and support informed decision-making among individuals undergoing cataract surgery.

CONCLUSION

Comprehensive informed consent is an important component of patient-centered cataract care and was associated with greater patient understanding, trust, confidence, and willingness to undergo cataract

surgery in this study. Most participants reported receiving satisfactory preoperative counselling and indicated that physician communication played an important role in their treatment decision-making. However, gaps remained in patients' awareness of surgical risks and the adequacy of preoperative information, highlighting opportunities to further strengthen counselling practices. Improving communication during the informed consent process may enhance patient engagement and support informed decision-making among individuals undergoing cataract surgery in similar clinical settings.

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