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ORIGINAL ARTICLE

Evaluation of Changes in Sexual Function After Cataract Surgery: A Prospective Study Using the International Index of Erectile Function (IIEF)

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Abstract

Objective: To evaluate postoperative changes in male sexual function after cataract surgery and to examine the association between improvements in visual acuity and sexual performance using the International Index of Erectile Function (IIEF).

Material and Methods: This prospective observational study included 52 men with age-related cataract who underwent uncomplicated phacoemulsification and intraocular lens implantation. Sexual function was assessed using the IIEF, encompassing erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction. Assessments were conducted preoperatively and one month postoperatively. Best-corrected visual acuity (BCVA) and demographic data were also recorded. Paired Student's t-test was used to compare pre- and postoperative results.

Results: The mean BCVA improved significantly from 0.58 ± 0.21 logMAR preoperatively to 0.14 ± 0.09 logMAR at one month ($p < 0.001$). Total IIEF scores increased from 35 ± 1.6 to 43 ± 1.7 ($p < 0.005$), indicating overall enhancement in sexual function. Significant improvements were observed in orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction ($p < 0.005$ for all), while changes in erectile function were not statistically significant ($p > 0.05$). Visual improvement correlated positively with changes in total IIEF score ($r = 0.52$, $p = 0.001$).

Conclusion: Cataract surgery not only restores vision but also positively influences sexual and psychosocial well-being. Improvements in sexual satisfaction, desire, and orgasmic function highlight the broader quality-of-life benefits of visual rehabilitation. Further large-scale studies are needed to clarify the mechanisms underlying this association.

Keywords: cataract surgery, International Index of Erectile Function (IIEF), sexual function, visual acuity

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INTRODUCTION

Cataract, one of the most common visual impairments associated with aging, adversely affects individuals' visual acuity and overall visual function, leading to significant limitations in daily life activities. Surgical correction of this visual loss not only restores visual acuity but also substantially improves patients' overall quality of life and psychosocial functioning (1–3).Recovery of visual function enhances individuals' independence, supports social interaction, and contributes to a more positive psychological outlook (4,5).

However, data on the effects of such improvement on sexual life remain limited. An early study found significant improvements in sexual desire and satisfaction after surgery but noted the scant evidence on this topic (6-9). Despite the importance of understanding the broader impacts of cataract surgery, a review of the existing literature reveals a clear gap: only a handful of studies—fewer than 10—address this specific interaction between visual improvement and sexual function. This scarcity underlines the need for more comprehensive research, such as the present investigation, to better elucidate these dynamics.

The present study aims to evaluate changes in Sexual function scores obtained from the International Index of Erectile Function (IIEF) in male patients following cataract surgery; to examine the relationship between improvement in visual function and changes in sexual function; and to elucidate the potential contribution of surgery to the quality of sexual life.

MATERIALS AND METHODS

Study Design and Participants

This prospective observational study was conducted at the Ophthalmology Department of Buldan State Hospital. Male patients diagnosed with age-related cataract who underwent uneventful phacoemulsification and intraocular lens implantation were included in the study.

The study adhered to the Declaration of Helsinki and received approval from the XXXXXXX University Non-Interventional Clinical Research Ethics Committee (Approval No: E-60116787-020-767116, Date: October 16, 2025). All participants provided written informed consent before inclusion in the study.

Inclusion and Exclusion Criteria

Inclusion criteria were: male patients aged ≥50 years, sexually active, diagnosed with senile cataract significantly affecting vision, and willing to complete the questionnaire form.

Exclusion criteria included past diabetic neuropathy, advanced cardiovascular disease, chronic renal failure, major psychiatric disorder, pelvic or prostate surgery, or use of antidepressants, antipsychotics, or phosphodiesterase inhibitors.

Surgical Procedure

All operations were performed by a single experienced surgeon (T.A.) under topical anesthesia using the standard, precise corneal phacoemulsification technique. In all cases, a foldable hydrophobic acrylic intraocular lens was implanted into the capsular bag.
The postoperative regimen consisted of topical antibiotic and corticosteroid eye drops, which were gradually tapered over four weeks.

Assessment of Sexual Function

Sexual function was evaluated using the International Index of Erectile Function (IIEF). This psychometrically validated self-report scale comprehensively assesses male sexual performance across five domains: erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction.

Each domain and the total IIEF score were calculated according to the original scoring system (total score range: 5–75; higher scores indicate better sexual function). The questionnaire was administered preoperatively and repeated at postoperative month 1, after stabilization of visual acuity.

Visual and Demographic Data

Uncorrected and best-corrected visual acuities (UCVA and BCVA) were assessed using a standard Snellen chart. Demographic data, including age, marital status, systemic comorbidities, and current medication use, were systematically recorded for all participants.

Statistical Analysis

Data were analyzed using SPSS version 26.0 (IBM Corp., Armonk, NY, USA). The distribution of the variables was assessed with the Kolmogorov–Smirnov test.

Preoperative and postoperative continuous variables were compared using the paired Student's *t*-test. A *p*-value < 0.05 was considered statistically significant. Results were expressed as mean ± standard deviation (SD).

RESULTS

A total of 52 male patients (mean age 57.3 ± 5.8 years) were included. All procedures were uneventful, with no postoperative intraocular complications.

A comparison of preoperative and postoperative first-month IIEF scores is presented in Table 1.

Total IIEF scores significantly increased after surgery (35 ± 1.6 → 43 ± 1.7; $p < 0.005$), indicating an overall enhancement in sexual function.

Subdomain analysis revealed statistically significant increases in orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction scores compared with preoperative values ($p < 0.005$ for all). In contrast, the increase in erectile function score did not reach statistical significance ($p > 0.005$). This outcome may be attributed to various factors, such as vascular comorbidities common in the patient population, which can independently influence erectile function despite visual improvements. Furthermore, age-related changes and the potential presence of underlying systemic conditions, like diabetes or hypertension, could affect erectile function. Exploring these alternative explanations provides a valuable direction for future research, which might investigate the complex interplay between vascular health, visual restoration, and sexual function dynamics within this patient group.

Preoperative mean BCVA was 0.58 ± 0.21 logMAR. It improved to 0.14 ± 0.09 logMAR at 1 month ($p < 0.001$). 95% of patients gained at least 2 Snellen lines.

A statistically significant positive correlation was observed between improvement in postoperative visual acuity and change in total IIEF score ($r = 0.52$, $p = 0.001$).

These findings suggest that enhancement of visual function not only improves visual performance but also has a favorable impact on psychosocial well-being and satisfaction with sexual life.

DISCUSSION

This study assessed sexual function changes in male patients after cataract surgery using the IIEF. There was a significant increase in the total IIEF score after surgery. Marked improvements were noted in all domains except erectile function, which did not show a significant change. Recovery of visual function appears to provide physical, psychological, and social benefits.

Cataracts are linked to loss of independence, depression symptoms, and lower quality of life in elderly individuals due to visual impairment. Improvements in visual acuity and quality-of-life scores following surgery have been shown to enhance self-care, mobility, and social participation (4,10,14). In the present study, the significant improvement in visual acuity was found to parallel the enhancement observed in sexual life. The recovery of visual function likely contributes to increased self-confidence and a more positive perception within intimate relationships.

Table 1. Comparison of preoperative and postoperative International Index of Erectile Function (IIEF) scores

Parameter	Preoperative (Mean ± SD)	Postoperative (Mean ± SD)	p-value
Total IIEF score	35 ± 1.6	43 ± 1.7	p < 0.005
Erectile function score	13 ± 2.1	14 ± 2.8	p > 0.005
Orgasmic function score	5.2 ± 1.4	7 ± 1.0	p < 0.005
Sexual desire score	4.6 ± 1.7	6 ± 1.6	p < 0.005
Intercourse satisfaction score	6.6 ± 1.3	8.9 ± 1.5	p < 0.005
Overall satisfaction score	6.0 ± 1.0	8.0 ± 1.0	p < 0.005

Data are presented as mean ± standard deviation. Comparisons between preoperative and postoperative scores were performed using the paired sample t-test. A p-value < 0.05 was considered statistically significant.

Significant improvements in sexual desire, orgasmic satisfaction, and overall satisfaction scores were observed after cataract surgery in male patients, while no significant change was noted in erectile function (6). This finding is entirely consistent with our results.

In addition, visual rehabilitation after cataract surgery has been shown to significantly improve patients' self-esteem and life satisfaction, further supporting the psychosocial benefits of surgical vision restoration (14).

Sexual function encompasses various dimensions, influenced by physiological, psychological, emotional, and social factors. Visual impairment can lead to lower self-esteem, social isolation, and depressive moods, all of which may diminish sexual function—desire (11,12,15). Surgical improvements in vision can alleviate negative influences, leading to a significant enhancement in subjective satisfaction and sexual fulfillment. This interpretation aligns with the notable increases observed in several IIEF subdomain scores postoperatively in our study.

However, the lack of a statistically significant improvement in erectile function may stem from its stronger dependence on vascular and neurological factors. Additionally, although major comorbidities were not identified, the advanced mean age of participants and the possible presence of systemic conditions—such as diabetes or hypertension—may have obscured potential changes. The strengths of this study include its prospective design, the standardized surgical technique performed by a single experienced surgeon, and the use of a well-validated assessment tool (IIEF).

Nevertheless, the study is limited by its inclusion of only male patients. The study lacked a control group and had a relatively small sample size, which may limit the generalizability of the findings. Due to the limited follow-up period of one month, the results represent early postoperative findings. Longer-term follow-up is required to determine whether changes in sexual function persist or evolve.

CONCLUSION

Cataract surgery not only provides visual rehabilitation but also exerts positive effects on patients' psychosocial and sexual quality of life. The significant improvements observed in subjective parameters such as sexual desire, orgasmic function, and overall satisfaction highlight the multidimensional contribution of surgery to overall well-being. Further research with larger sample sizes and longer follow-up periods is necessary to better understand the underlying psychophysiological mechanisms of this association.

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Conflict of Interest: The authors declare no conflict of interest.

Informed Consent: Written informed consent was obtained from all participants before enrollment in the study.

Ethics Approval: Approved by the Pamukkale University Non-Interventional Clinical Research Ethics Committee (Approval No: E-60116787-020-767116, Date: October 16, 2025)

Authors' Contributions

T.A. conceived and designed the study, performed all surgical procedures, and drafted the manuscript.
E.S.U. collected and organized the clinical data.
O.P. performed statistical analysis and literature review.

Consent to Publish: All participants provided consent for anonymized data to be published in a scientific journal.
The data supporting the findings of this study are available from the corresponding author on reasonable request.

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