

ORIGINAL ARTICLE

Impact of Cataract Surgery on Sexual Quality of Life in Women: A Prospective Study Using the Sexual Quality of Life–Female

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Received: January 26, 2026 / Accepted: April 25, 2026

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Abstract

Objective: To evaluate the impact of cataract surgery on sexual quality of life in female patients using the Sexual Quality of Life–Female (SQOL-F) questionnaire.

Material and Methods: This prospective observational study included 67 female patients who underwent cataract surgery. Sexual quality of life was assessed preoperatively and again at 3 months postoperatively using the Sexual Quality of Life–Female (SQOL-F) scale. This is a validated 18-item Likert-type instrument that assesses emotional, psychological, and relational aspects of sexual life. Scores were transformed to a 0–100 scale, with higher scores indicating better sexual quality of life. Demographic variables included age, education level, employment status, and economic status. Statistical comparisons between preoperative and postoperative scores were performed.

Results: Sixty-seven women participated. Sexual quality-of-life scores improved after cataract surgery. For patients over 60 years, SQOL-F scores rose from 58.7 ± 7.2 to 76.9 ± 11.3 ($p < 0.05$). Patients under 60 showed no significant improvement. Those with lower education and those with low or high economic status showed significant gains ($p < 0.05$), whereas university-educated or employed patients did not. These results show that cataract surgery's impact on sexual quality of life differs by sociodemographic group.

Conclusion: Cataract surgery can improve sexual quality of life in women, especially older patients and those with lower socioeconomic status. This suggests cataract surgery offers psychosocial benefits beyond vision improvement. Larger studies are needed to confirm these findings.

Keywords: cataract surgery, functional vision, sexual function, Sexual Quality of Life–Female (SQOL-F)

INTRODUCTION

Cataract is a leading cause of visual impairment worldwide, particularly among aging populations. It is associated with progressive deterioration in visual acuity and functional vision. This decline often results in significant restrictions in daily activities, reduced independence, and diminished overall quality of life.

Cataract surgery remains the most effective treatment. It provides not only restoration of visual function but also meaningful improvements in general well-being, including psychological health and social engagement (1–4). Recent systematic reviews and meta-analyses have further confirmed improvements in vision-related quality of life and mental health outcomes after cataract

surgery (3,4). Improved vision following surgery has been shown to enhance autonomy and promote active participation in social life. It can also contribute to a more positive emotional state and greater life satisfaction (5,6).

Despite these benefits, few studies have examined how cataract surgery affects sexual quality of life, especially in women. Sexual health includes emotional, psychological, and relational factors, all of which visual impairment may affect. Reduced vision can lower self-esteem, lead to social withdrawal, and impair relationships (6), which may harm sexual quality of life. Whether cataract surgery improves these areas is still unclear.

A review of the existing literature reveals a notable gap. Only a limited number of studies address the relationship between visual function and sexual well-being, and even fewer focus specifically on women. Moreover, most available studies have primarily evaluated sexual function rather than sexual quality of life. This approach overlooks important psychosocial dimensions, such as emotional well-being, self-perception, and relational intimacy (7-10).

Therefore, the present study aims to evaluate changes in sexual quality of life in female patients following cataract surgery using the Sexual Quality of Life-Female (SQOL-F) questionnaire. Additionally, this study seeks to examine the association between improvements in visual function and changes in sexual quality of life. It also aims to explore the broader psychosocial effects of cataract surgery beyond visual rehabilitation.

MATERIALS AND METHODS

Study Design and Participants

We conducted a prospective observational study at the Ophthalmology Department. Female patients with age-related cataract who had uncomplicated phacoemulsification with intraocular lens implantation were included.

The study followed the Declaration of Helsinki and was approved by the Pamukkale University Non-Interventional Clinical Research Ethics Committee (Approval No: E-60116787-020-767116; Date: October 16, 2025). All participants gave written informed consent before enrollment.

Inclusion and Exclusion Criteria

Inclusion criteria: women 50 years or older, sexually active, diagnosed with senile cataract causing significant visual loss, and able and willing to complete the questionnaire. Sexually active was defined as having engaged in sexual activity within the last 3 months.

Exclusion criteria: diabetic neuropathy, advanced heart disease, chronic renal failure, major psychiatric illness, prior pelvic surgery, or use of drugs known to impair sexual function, including antidepressants, antipsychotics, and phosphodiesterase inhibitors.

Surgical Procedure

One experienced surgeon performed all operations using topical anesthesia and a standard clear corneal phacoemulsification technique. All patients received a foldable hydrophobic acrylic intraocular lens in the capsular bag.

After surgery, patients used antibiotic and corticosteroid eye drops, gradually tapering over four weeks.

Data Collection

Uncorrected and best-corrected visual acuities (UCVA and BCVA) were assessed using a standard Snellen chart. Demographic and clinical data, including age, education level, employment status, and socioeconomic status, were recorded. Sexual quality of life was assessed preoperatively and again at 3 months postoperatively using the Sexual Quality of Life-Female (SQOL-F) questionnaire.

Assessment Tool: Sexual Quality of Life-Female (SQOL-F)

The SQOL-F is a validated, self-administered questionnaire consisting of 18 items. It evaluates the impact of sexual dysfunction on women's quality of life across emotional, psychological, and relational domains. Each item is rated on a 6-point Likert scale (1 = completely agree to 6 = completely disagree). The total raw score ranges from 18 to 108 and is transformed to a standardized 0-100 scale using the formula: $(\text{raw score} - 18) \times 100 / 90$. Higher scores indicate better sexual quality of life. The questionnaire assesses multiple aspects, including emotional well-being, sexual self-esteem, relationship satisfaction, and behavioral responses to sexual activity.

Outcome Measures

The primary outcome was the change in SQOL-F scores between preoperative and three-month postoperative assessments. Secondary analyses compared subgroups by age, education, employment, and economic status.

Statistical Analysis

Statistical analyses were performed using SPSS version 26.0 (IBM Corp., Armonk, NY, USA). The normality of data distribution was assessed using the Kolmogorov–Smirnov test. Continuous variables were expressed as mean ± standard deviation.

Paired comparisons between preoperative and postoperative scores were performed using the paired t-test for normally distributed data and the Wilcoxon signed-rank test for non-normally distributed data. Between-group comparisons were conducted using the independent-samples t-test or the Mann–Whitney U test, as appropriate. A p-value <0.050 was considered statistically significant.

RESULTS

We studied 67 women undergoing cataract surgery. We measured changes in sexual quality of life scores before surgery and at three months, analyzing different demographic subgroups.

The mean preoperative best-corrected visual acuity (BCVA) was 0.53 ± 0.18 logMAR. This significantly improved to 0.14 ± 0.09 logMAR at the first postoperative month (p < 0.001), reflecting a substantial gain in visual

function. This improvement may have contributed to better quality-of-life outcomes.

Overall, the mean SQOL-F score significantly increased from 51.6 ± 7.8 preoperatively to 64.5 ± 10.5 at 3 months postoperatively (p < 0.001).

Overall, postoperative SQOL-F scores demonstrated an increasing trend across most subgroups. In the age-based analysis, patients older than 60 years showed a statistically significant improvement in sexual quality-of-life scores, increasing from 58.7 ± 7.2 preoperatively to 76.9 ± 11.3 at 3 months postoperatively (p < 0.050). In contrast, patients younger than 60 years showed a non-significant increase from 44.8 ± 5.5 to 52.4 ± 6.4 (p > 0.050).

Patients with primary or high school education had a significant increase in SQOL-F (60.3 ± 7.7 to 74.4 ± 9.8, p < 0.050). The increase for university-educated patients (53.4 ± 4.2 to 61.7 ± 5.8) was not significant (p > 0.050).

Regarding employment status, neither retired nor working patients demonstrated a statistically significant improvement in sexual quality of life. In retired patients, SQOL-F scores increased slightly from 46.9 ± 4.3 to 48.1 ± 7.4, while in working patients, scores increased from 56.2 ± 6.1 to 65.5 ± 6.7; however, these changes did not reach statistical significance (p > 0.050 for both).

Analysis based on socioeconomic status revealed that patients with low and high economic levels experienced

Table 1. Comparison of preoperative and postoperative 3rd-month SQOL-F scores according to demographic characteristics in female patients undergoing cataract surgery

Parameter	Subgroup (n)	Preoperative SQOL-F (Mean ± SD)	Postoperative 3rd Month SQOL-F (Mean ± SD)	P value
Age	>60 years (n=33)	58.7 ± 7.2	76.9 ± 11.3	<0.050
	<60 years (n=34)	44.8 ± 5.5	52.4 ± 6.4	>0.050
Education level	University (n=12)	53.4 ± 4.2	61.7 ± 5.8	>0.050
	Primary–High school (n=55)	60.3 ± 7.7	74.4 ± 9.8	<0.050
Employment status	Employed (n=18)	56.2 ± 6.1	65.5 ± 6.7	>0.050
	Retired (n=49)	46.9 ± 4.3	48.1 ± 7.4	>0.050
Economic status	Low (n=28)	52.7 ± 9.2	65.4 ± 11.8	<0.050
	Middle (n=24)	50.3 ± 6.9	54.8 ± 6.3	>0.050
	High (n=15)	48.2 ± 5.9	69.3 ± 9.4	<0.050

significant improvements in SQOL-F scores (low: 52.7 ± 9.2 to 65.4 ± 11.8 ; high: 48.2 ± 5.9 to 69.3 ± 9.4 ; both $p < 0.050$). However, no statistically significant change was observed in patients with moderate economic status (50.3 ± 6.9 to 54.8 ± 6.3 ; $p > 0.050$).

These findings indicate that improvements in sexual quality of life following cataract surgery were more pronounced in older patients and in certain sociodemographic groups, particularly those with lower educational and economic status.

DISCUSSION

The present study demonstrates that cataract surgery is associated with improvements in sexual quality of life in women, particularly in domains related to emotional well-being, sexual self-esteem, and relational intimacy as assessed by the SQOL-F questionnaire. These improvements were more pronounced in older patients and certain sociodemographic subgroups, suggesting that baseline characteristics may influence postoperative outcomes.

Previous studies have shown that sexual quality of life is largely shaped by psychosocial factors, including emotional status, relationship dynamics, and overall life satisfaction, rather than purely physiological function (11). In this context, improvements in visual function may indirectly enhance sexual quality of life by positively affecting psychological and relational domains.

The greater improvement observed in patients aged 60 years or older is consistent with prior research indicating that cataract surgery leads to significant gains in vision-related quality of life, particularly in elderly populations (12,13). Furthermore, evidence from systematic reviews suggests that cataract surgery contributes not only to visual rehabilitation but also to improvements in overall well-being, mental health, and functional independence (4). Given the well-established association between visual impairment and depression, reduced autonomy, and impaired social functioning (6), restoration of vision may exert a more pronounced psychosocial impact in older individuals, thereby enhancing sexual quality of life.

Differences observed across educational and socioeconomic subgroups may reflect variations in baseline psychosocial status. Individuals with lower

preoperative quality of life or limited psychosocial resources may experience greater relative improvements following visual rehabilitation, consistent with previous quality-of-life research demonstrating larger effect sizes in individuals with lower baseline functioning (14).

The strengths of this study include its prospective design, the use of a standardized surgical technique performed by a single experienced surgeon, and the application of a validated instrument (SQOL-F) to assess sexual quality of life.

Despite these strengths, several limitations should be acknowledged. The relatively small sample size may have limited the statistical power, particularly in subgroup analyses. In addition, the study's inclusion of only female patients and the absence of a control group represent further limitations. As the follow-up period was limited to three months, the findings primarily reflect early postoperative outcomes. Further studies with larger sample sizes and longer follow-up durations are required to evaluate the long-term stability and progression of changes in sexual function.

Another important limitation of this study is the absence of a control group. Therefore, although significant improvements in sexual quality of life were observed following cataract surgery, these changes cannot be attributed solely to the surgical intervention. Other factors, including psychological adaptation, placebo effects, or unmeasured confounders (such as menopausal status, presence of a sexual partner, systemic diseases, and depression or overall psychological status), may have contributed to the observed outcomes. Further studies incorporating control groups and accounting for these variables are needed to better establish the causal relationship between cataract surgery and changes in sexual quality of life.

CONCLUSION

Cataract surgery not only improves functional vision but also substantially impacts overall quality of life by enhancing sexual quality of life through its psychosocial effects, particularly in the emotional, self-perceptive, and relational domains. Further studies with larger sample sizes and longer follow-up periods are required to better understand the long-term effects

of this relationship and its variations across different subgroups.

Acknowledgments: None.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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

İ.S. conceived and designed the study, and drafted the manuscript. T.A. collected and organized the clinical data, performed all surgical procedures G.K.A. 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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