

Fear Among Cataract Patients Undergoing Surgery and Nurses' Role

Kimberly Ralte¹, Neethu Paul², Bindhu Mathew³, Shreemayee Panda⁴

¹MSc Nursing Student, Department of Medical Surgical Nursing, St. John's College of Nursing, Bangalore, India, 560034

²Assistant Professor, Department of Medical Surgical Nursing, St. John's College of Nursing, Bangalore, India, 560034

³Professor, Department of Medical Surgical Nursing, St. John's College of Nursing, Bangalore, India, 560034

⁴Tutor, Department of Medical Surgical Nursing, St. John's College of Nursing, Bangalore, India, 560034

Corresponding Author: Kimberly Ralte

DOI: <https://doi.org/10.52403/ijshr.20230274>

ABSTRACT

Aims: This article aimed to review the fear experienced by cataract patients.

Background: Cataracts are the primary cause of blindness and significantly decrease quality of life. Cataract surgery is the most commonly performed surgical procedure worldwide, which is done under local anaesthesia.

Methods: We included studies from various credible scientific databases, such as PubMed, Science Direct and Google Scholar.

Results: Fear experienced by cataract patients was at its peak during the pre-operative period. Their experience during the surgery contributed to the fear in a few of the patients as it is performed under local anaesthesia. Postoperatively, their fear subsided and various interventions, such as handholding and massages, can decrease the anxiety or fear that they experienced.

Conclusion: Patients undergoing cataract surgery experience fear of blindness, anxiety and nervousness about the surgery, and misconceptions can also contribute to the fear. They require adequate counselling and specific interventions to improve their overall experience of the surgery.

Keywords: Fear, anxiety, cataract surgery, phacoemulsification, local anaesthesia, retrobulbar anaesthesia, nursing interventions

INTRODUCTION

Cataracts are the most common cause of visual impairment and the leading cause of blindness worldwide. According to WHO, the prevalence of cataracts worldwide is 94 million approximately in 2022. There are approximately 78.6 million people in the world having moderate to severe visual impairment because of cataracts.^[1] In India, the survey of the Ministry of Health and Family Welfare from 2015 to 2019 reported that cataract account for 66.2% of blindness among ≥ 50 years of age, and 71.2% of visual impairments are caused by untreated cataracts.^[2]

A cataract is a clouding or opacification of the eye's lens or capsule that impairs light's ability to travel through the lens and reach the retina. Ageing, congenital cataracts, traumatic injuries such as perforated trauma and chemical injury in young people, systemic diseases like myotonic dystrophy, endocrine disorders like diabetes mellitus, primary ocular diseases, and many more factors are among the multifactorial causes of cataracts.^[3,4] Several studies have shown that cataract has a major impact on quality of life, increasing difficulty with daily tasks, depression, social isolation, risk of falls and fractures, general health deterioration, lower social position, and mortality.^[5-9]

The most effective treatment for cataracts is cataract surgery, which accounts for 9.5 million operations worldwide annually. [10] Patients feel fear and other intense emotions while it is being done under local anaesthesia. Fear is an unpleasant emotion brought on by the expectation of danger, pain, discomfort, or harm. It is essential to know and comprehend the "fear" that cataract patients experience to provide great quality treatment.

MATERIALS & METHODS

A total of 18 articles were reviewed to analyze the "fear" experienced by cataract patients. We included articles that were published in English from various credible scientific databases, such as PubMed, Science Direct and Google Scholar. Databases were searched using keywords. All citations were imported to Zotero from electronic databases. An independent review of the articles was done, and each article was analyzed to be relevant to nursing practice and for the review.

RESULT

THE PRE-OPERATIVE PERIOD

One factor that triggers fear is major life changes, and surgery is one of those adjustments. It is well recognised that hospitalization, independent of the illness, causes fear in the patient being hospitalised for surgery. Lack of adequate information and expected post-surgical outcomes causes fear among patients. [11] Adequate

communication and orientation are vital to enhancing the patient's experience of the surgery.

The most common emotion that the patients experienced are fear (60.5%), anxiety (18.4%) and nervousness (13.1%) about the surgery which was more common among women whereas insecurity (5.2%) was only present in the male. [12] Nikamp et al reported that the patients undergoing cataract anxiety level is at its peak on the pre-operative day (Table 1) and subsided immediately after the surgery probably because of relief. Trait anxiety, outcome expectations, social support, gender, and hospital were factors that substantially ($p = 0.05$) correlated with state anxiety. [13]

Preoperative discussions on the risks of the procedure can contribute to the peak of fear or anxiety experienced by cataract patients who are undergoing surgery. Their main fear is the risk that their vision might not fully recover before they undergo surgery and any complications that may arise. [14] Assessment of the patient's source of anxiety can address this concern. Marback et al. have identified the emotional factors before cataract surgery and 33% reported fear of blindness, 57% feared vision loss and 12.7% feared death during the surgery. Regarding the surgical procedure, the patients reported doubt as to the outcome (32.7%), distress/anxiety (26.4%), sadness (25.5%), happiness (10.9%), and anger (4.5%) mentioned. [15]

Table 1: Anxiety level at different points of time among cataract patients(N=128)

Time points	1 Before surgery	2 Minutes before surgery or retrobulbar anaesthesia)	3 Immediately after the surgery	4 A day after the surgery
STAI Scores among cataract patients	1.8±0.81	1.8±0.75	1.1±0.34	1.3±0.48

Source: Nijkamp MD, Kenens CA, Dijker AJ, Ruiters RA, Hiddema F, Nuijts RM. Determinants of surgery-related anxiety in cataract patients. British Journal of Ophthalmology. 2004 Oct 1;88(10):1310-4.*STAI: State-Trait Anxiety Inventory *Mean±SD

A qualitative study in Rural Kenya by Gabott et al. identified that preoperative fears were influenced by inaccurate "rumours" heard from their friends and family regarding the cataract surgery, and expected pain, the possibility of not achieving the expected visual function after the surgery. Any poor surgical outcome was

publicised in the local community, which contributed to negative opinions regarding the surgery. Unreliable pieces of information regarding the surgery imposes "fear" and the patients choose not to undergo cataract surgery, it hinders their opportunity to improve their quality of life. 'Fear of blindness' was the most common misconception that defies cataract patients to undergo surgery. [16] Therefore nurses can identify misconceptions or beliefs that exist especially in a diverse culture like India and illuminate accurate information and teachings to cataract patients. To provide a seamless perioperative experience, information should be adequately conveyed by healthcare professionals since pre-operative fear can cause decreased comfort in the postoperative period. [17]

THE INTRA-OPERATIVE PERIOD

Fear brought on by irrational visual perceptions has frequently been documented in the literature. Several studies have shown that patients undergoing cataract surgery have visual experiences ranging from light perception, colour, different shapes and movements of the surgeon's hands or instruments and patients who reported colour perceptions were likely to experience fear during the surgery. [18-22]

According to Rengaraj et al.'s randomised controlled trial in Madurai, 100% of the topical anaesthesia group perceived light and 83.1% perceived colour whereas 90.7% perceived light and 61.3% perceived colour from the retrobulbar anaesthesia group. Although this finding was unaffected by the subjects' age, the laterality of the procedure, the length of the procedure, or how they perceived light, colours, movement, flashes, instruments, the surgeon or other medical personnel, or changes in the brightness of the light, 10.4% of the topical anaesthesia group and 9.3% of the retrobulbar anaesthesia group reported finding their visual experience frightening. [23]

Yu et al. identify that patients with better visual acuity were frightened by the intraoperative visual experiences and had

the desire for general anaesthesia to avoid these experiences. A total of 53% of patients reported in this study which was much higher than in other studies possibly because the majority of the patients were from rural China. [24] A multi-centre study by Tan C et al reported that nine patients 9 out of 65 patients interviewed reported being terrified by what they saw during surgery. Younger patients tend to be frightened, which can also result in prolonged surgical duration. [25] According to a study by Chaudhry et al., patients' lack of knowledge about the potential for such emotions before cataract surgery contributed to a significant amount (26.4%) of their fear related to intraoperative visual experiences. [26]

The ignorance of these experiences of the patients during the surgery by the health care professionals is a concern. Studies among doctors in Pakistan have revealed that they lack adequate knowledge that visual perceptions can be associated with fear intraoperatively. [27] On the contrary, in a nationwide study in the UK, the majority of ophthalmologists believed that visual perceptions during surgery can arouse fear and that pre-operative counselling can alleviate these fears. Nurses are involved in the care of cataract patients intraoperatively as well, and there is a dire need to educate them on the fear experienced during surgery. [28]

THE POSTOPERATIVE PERIOD

Most of the patient's preoperative fears have subsided with improved visual outcomes after the surgery. There is a rise in the level of anxiety (Table 1) a day after the surgery, which could be provoked by additional concerns and expectations indicating the importance of post-operative counselling. The outcomes of cataract surgery are satisfactory and with improvement in their visual acuity, the fear that patients experience before the surgery is unlikely to mitigate post-operatively but they require adequate counselling by the healthcare professionals. Educating nurses on the theoretical aspect of cataract surgery

and practical training in comprehensive post-operative nursing improves the nursing practice to meet the needs of activities of daily living, administration of medications, and pre-discharge instructions among cataract patients.^[29]

NURSING INTERVENTIONS FOR FEAR EXPERIENCED BY CATARACT PATIENTS

Various interventions have been proven to be effective in promoting a sense of well-being among pre-operative patients. Nurses are an integral part of pre-operative counselling and since they establish good interpersonal relationships with the patients, they are a reliable source of information for them.^[30]

Informative, educational, and planned nursing care have a very beneficial effect on reducing the level of anxiety in patients undergoing cataract surgery. Educational sessions undertaken by nurses have been shown to reduce the level of anxiety and satisfaction with the experience of the surgery. The sessions included topics such as anatomy and functional structures of the eye, cooperation during the surgery, pain management, rehabilitation care and psychological preparation to relieve anxiety after the surgery through multimedia and videotapes.^[31] Patient education, positive suggestions, relaxation, and imagery can help them cooperate during the surgery.^[32]

Pre-operative counselling on the potential visual experiences intraoperatively can reduce fear and enhance satisfaction.^[33] There is no literature published on pre-operative counselling by nurses among cataract patients till date. Thus, it highlights the need for nurses to focus on establishing rapport and communicating information to the patients in their daily practice. Moon et al. reported in their randomized controlled trial that non-invasive intervention, i.e. "handholding" was helpful in reducing intraoperatively among cataract patients.^[34] Thus, nursing interventions are indeed beneficial and efficient in providing comfort

and emotional stability among cataract patients.

CONCLUSION

Patients undergoing cataract surgery experience fear of blindness, anxiety and nervousness about the surgery, which can be overwhelming. Misconceptions and false information can contribute to the fear as well. They require adequate pre-operative counselling by health care professionals. Nurses must engage themselves in pre-operative counselling and education of patients for their cooperation and satisfaction. The visual experiences of the patients include the perception of light or colour and these can provoke fear intraoperatively. Raising awareness among doctors and nurses about the fear of cataract patients is a necessity. The overall experience of the surgery can be enhanced by counselling and non-invasive interventions such as handholding and massages. Nurses can persuade research in these areas as nursing interventions can benefit the patients extensively.

Declaration by Authors

Ethical Approval: Not Applicable

Acknowledgement: None

Source of Funding: None

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

REFERENCES

1. Pascolini D, Mariotti SP. Global estimates of visual impairment: 2010. *British Journal of Ophthalmology*. 2012 May 1;96(5):614-8.
2. Prasad R. National blindness and visual impairment survey India (2015-2019)-A summary report. Ministry of Health and Family Welfare, Government of India, New Delhi.
3. Nizami AA, Gulani AC. Cataract. *StatPearls Publishing* [Internet];2022 Jul 5. Available from <https://pubmed.ncbi.nlm.nih.gov/30969521/>
4. Gupta VB, Rajagopala M, Ravishankar B. Etiopathogenesis of cataract: an appraisal.

- Indian journal of ophthalmology. 2014 Feb;62(2):103
5. He M, Wang W, Huang W. Variations and trends in health burden of visual impairment due to cataract: a global analysis. *Investigative Ophthalmology & Visual Science*. 2017 Aug 1;58(10):4299-306.
 6. Zhu M, Yu J, Zhang J, Yan Q, Liu Y. Evaluating vision-related quality of life in preoperative age-related cataract patients and analyzing its influencing factors in China: a cross-sectional study. *BMC ophthalmology*. 2015 Dec;15(1):1-7.
 7. Amedo AO, Koomson NY, Pascal TM, Kumah DB, Ocansey JN, Asare-Bediako B. Quality of life of cataract patients before and after surgery-evidence from four rural communities in Ghana. *Mathews Journal of Ophthalmology*. 2016 Jun 13;1(1):1-7.
 8. Anbesse DH, Bizuneh ZY, Girum W, Mengistu MA. Vision Related Quality of Life among Cataract Patients Attending Cataract Surgery Campaigns in Ethiopia: A Dual Centre Study. *Journal of Clinical and Experimental Ophthalmology*. 2022 Feb 14;13(3):1-6.
 9. Bandhu SD, Vabale YG, Sambarey PP, Walke AB, Raje S. Impact of cataract on the quality of life of rural patients in India. *Journal of Clinical Ophthalmology and Research*. 2016 May 1;4(2):75.
 10. Singh G, Gupta G. Quality of life in cataract patients. *Paripex Indian journal of Research*. 2020 June; 36106.
 11. Obuchowska I, Konopinska J. Fear and anxiety associated with cataract surgery under local anesthesia in adults: a systematic review. *Psychology Research and Behavior Management*. 2021 Jun 18:781-93.
 12. Konjevoda S, Gusar I, Perić S, Striber N, Škara Kolega M, Didović Pavičić A, Paštar Z, Grašić DJ, Perić D, Caktaš IL, Čanović S. Fear of Blindness in Patients Undergoing Cataract Surgery. *Psychiatria Danubina*. 2021 Oct 19;33(suppl 4):609-12
 13. Nijkamp MD, Kenens CA, Dijker AJ, Ruiter RA, Hiddema F, Nuijts RM. Determinants of surgery related anxiety in cataract patients. *British journal of ophthalmology*. 2004 Oct 1;88(10):1310-4.
 14. Ustunel, F., & Erden, S. (2022). Evaluation of Fear of Pain Among Surgical Patients in the Preoperative Period. *Journal of perianesthesia nursing : official journal of the American Society of PeriAnesthesia Nurses*, 37(2), 188–193. <https://doi.org/10.1016/j.jopan.2021.02.003>
 15. Marback R, Temporini E, Júnior NK. Emotional factors prior to cataract surgery. *Clinics*. 2007 Aug 1;62(4):433-8.
 16. Gabbott T, Roberts H, Briesen S. Assessing the fear of cataract surgery in rural Kenya. *Cogent Medicine*. 2019 Jan 1;6(1):1607434
 17. Ramirez DA, Brodie FL, Rose-Nussbaumer J, Ramanathan S. Anxiety in patients undergoing cataract surgery: a pre-and postoperative comparison. *Clinical Ophthalmology*. 2017 Nov 10:1979-86.
 18. Taylan S, Çelik GK. The effect of preoperative fear and related factors on patients' postcataract surgery comfort level: A regression study. *Journal of PeriAnesthesia Nursing*. 2022 Jun 1;37(3):398-403.
 19. Eong KG, Low CH, Heng WJ, Aung T, Lim TH, Ho SH, Yong VS. Subjective visual experience during phacoemulsification and intraocular lens implantation under topical anesthesia. *Ophthalmology*. 2000 Feb 1;107(2):248-50.
 20. Eong KA. 6th Yahya Cohen Lecture: visual experience during cataract surgery. *ANNALS-ACADEMY OF MEDICINE SINGAPORE*. 2002 Sep 1;31(5):666-74.
 21. Wickremasinghe SS, Tranos PG, Sinclair N, Andreou PS, Harris ML, Little BC. Visual perception during phacoemulsification cataract surgery under subtenons anaesthesia. *Eye*. 2003 May;17(4):501-5.
 22. Vohra SB, Kumar CM, Murray PI. Subjective visual perceptions during intraocular surgery under local anaesthesia: a review. *Current Anaesthesia & Critical Care*. 2010 Aug 1;21(4):189-95.
 23. Rengaraj V, Radhakrishnan M, Eong KG, Saw SM, Srinivasan A, Mathew J, Ramasamy K. Visual experience during phacoemulsification under topical versus retrobulbar anesthesia: results of a prospective, randomized, controlled trial. *American journal of ophthalmology*. 2004 Nov 1;138(5):782-7.
 24. Yu JF, Liang L, Wen YQ, Liu L, Huang YF. Patients' subjective visual experiences during vitreous surgery under local anesthesia. *Int J Clin Exp Med*. 2011 Sep 15;4(3):205–13.
 25. Tan CS, Mahmood U, O'Brien PD, Beatty S, Kwok AK, Lee VY, Eong KG. Visual

- experiences during vitreous surgery under regional anesthesia: a multicenter study. *American journal of ophthalmology*. 2005 Dec 1;140(6):971-5.
26. Chaudhry TA, Aqil A, Aziz K, Javed AA, Tauqir MZ, Ahmad K. Patients' visual experience during phacoemulsification cataract surgery and associated fear. *BMC Research Notes*. 2014 Dec;7(1):1-4.
 27. Tauqir MZ, Chaudhry TA, Mumtaz S, Ahmad K. Knowledge of patients' visual experience during cataract surgery: a survey of eye doctors in Karachi, Pakistan. *BMC ophthalmology*. 2012 Dec;12(1):1-5.
 28. Laude A, Eong KA, Mills KB. Knowledge of visual experience during cataract surgery under local anaesthesia: a nationwide survey of UK ophthalmologists. *British journal of ophthalmology*. 2009 Apr 1;93(4):510-2.
 29. Abdel Azeem A, Abdullah WH, Shehata O, Ellakwa AF. Effect of Nursing Intervention on Nurses' Knowledge and Practice Regarding Cataract Surgery. *Menoufia Nursing Journal*. 2019 Nov 1;4(2):95-105.
 30. Yang K, Shao X, Lv X, Yang F, Shen Q, Fang J, Chen W. Perioperative psychological issues and nursing care among patients undergoing minimally invasive surgeries. *Laparoscopic, Endoscopic and Robotic Surgery*. 2022 Jun 22.
 31. Gong DH, Liu JF, Zhao X, Zhang L. The effect of nursing intervention on preoperative cataracts. *Medicine*. 2018 Oct;97(42).
 32. Kekecs Z, Jakubovits E, Varga K, Gombos K. Effects of patient education and therapeutic suggestions on cataract surgery patients: A randomized controlled clinical trial. *Patient education and counselling*. 2014 Jan 1;94(1):116-22.
 33. Haripriya A, Tan CS, Venkatesh R, Aravind S, Dev A, Eong KG. Effect of preoperative counselling on fear from visual sensations during phacoemulsification under topical anaesthesia. *Journal of Cataract & Refractive Surgery*. 2011 May 1;37(5):814-8.
 34. Moon JS, Cho KS. The effects of handholding on anxiety in cataract surgery patients under local anaesthesia. *Journal of advanced nursing*. 2001 Aug 23;35(3):407-15.

How to cite this article: Kimberly Ralte, Neethu Paul, Bindhu Mathew et.al. Fear among cataract patients undergoing surgery and nurses' role. *International Journal of Science & Healthcare Research*. 2023; 8(2): 546-551.
DOI: <https://doi.org/10.52403/ijshr.20230274>
