



CODEN [USA]: IAJ PBB

ISSN : 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

SJIF Impact Factor: 7.187

Available online at: <http://www.iajps.com>

Research Article

**ASSESS THE KNOWLEDGE OF POST OPERATIVE NURSING
CARE OF CATARACT SURGERY AMONG NURSES AT LAHORE
GENERAL HOSPITAL, LAHORE**

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Email ID:ushnahamna@gmail.com**Article Received:** July 2021**Accepted:** August 2021**Published:** September 2021**Abstract:**

Cataract is one of the major cause of blindness in elderly worldwide. Lack of proper postoperative nursing care may lead to irreversible repercussions for the patients and the family. The aim of this study was to examine the role of the practical application of nursing guidelines with their knowledge and practices on attaining post cataract surgery benefits. This quasi-experimental pre-post assessment study was carried out on 100 nurses working at the outpatient Department of Ophthalmology Mayo Hospital Lahore on 200 patients undergoing cataract surgery. Data collection tools consisted of a self-drafted questionnaire and an observation checklist. The researchers designed Nursing SOPs based on analysis of the data collected in the assessment phase to provide nurses with guidelines for the post operative cataract surgery. The evaluation of the effect of guidelines on nurses knowledge and practice, and consequently on patients needs was examined immediately after implementation and after 3 months of follow up. The results showed statistically significant improvements in nurses knowledge and practice at the post and follow-up tests ($p < 0.001$), with statistically significant strong positive correlation ($r = 0.714$) between them. Also, there were statistically significant improvements in all areas of patient needs after implementation ($p < 0.001$). In multivariate analysis, the intervention was a statistically significant independent positive predictor of the improvement in nurses' knowledge and practice, and of patients' needs. In conclusion, implementing nursing guidelines for care of cataract patients after surgery is effective in inducing improvements in nurses' related knowledge and practice, which better achievement of patients' needs. It is recommended that these guidelines be used in similar settings. Further research is proposed to investigate the effect of implementation of guidelines in reducing post operative cataract complications.

Keywords: Cataract, Postoperative, Nursing, Guidelines, Knowledge, Practice

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Please cite this article in press Ghazala Shaheen et al, Assess The Knowledge Of Post Operative Nursing Care Of Cataract Surgery Among Nurses At Lahore General Hospital, Lahore., Indo Am. J. P. Sci, 2021; 08(9).

1. INTRODUCTION:

Cataract is defined as the loss of optical uniformity of the crystalline ocular lens, developing over a period of time from minimal changes of natural transparency to total opacity (WHO, 2013), leading to serious visual acuity impairment such that only light perception remains (Casparis, 2012). Although the prevalence is age related, yet aging is more often associated with incidence of cataract-induced visual impairment and blindness globally (Randleman, 2014). It is speculated that more than 82.0% of the world blindness in 50 years older population is related to cataract alone (Abraham & Condon 2006).

Cataract is linked with suboptimal health status, activity limitations, impaired road sense, significant emotional distress and decreased quality of life. Moreover, impaired visual acuity can be a contributory psychological stressor for the patient as well as family members (Polack et al, 2007). Cataract surgery is usually advised when the visual acuity declines to about 20/50, to preserve patient safety and quality of life (Miller, 2009). The safe and proven treatment for cataract is surgery to remove the natural lens and replace it with artificial one but it produces variable outcome and is not easily available to most people in developing world. There is an overwhelming need for the provision of visual rehab services indiscriminately (Trent & Albright 2014).

A candidate undergoes a thorough pre-operative evaluation to analyze co-morbidities, contraindications, prognosis and outcomes (Vincent & Patalano, 2012). The nurses are expected to assess the patient's basic needs and intervene for their provision. Needs can be defined as the requirements of individuals to equip them to attain, maintain or restore an acceptable level of social independence or quality of life (Mansfield et al, 2011). Hence, identifying the needs of post-operative cataract understanding their physiological, psychological, and spiritual needs are essential skills for the ophthalmic

nurse who should incorporate them in the form of nursing intervention (Potter & Perry, 2001). Inadequate postoperative nursing care may lead to serious complications for the patient with cataract surgery (Surrena, 2009). The purpose of the nursing guideline is to enhance the quality, safety, effectiveness and availability of care for patient with cataract, to evaluate the effectiveness and appropriateness of techniques of prevention, diagnosis, treatment and clinical management of the healthy adult patient with cataracts (ACOES, 2013).

2. SUBJECTS AND METHODS:

The study was based on a quasi-experimental design with pre and post assessment test. 50 nurses were enrolled in the study involved in postoperative care of cataract patients. Participants were briefed about the proceeding through audio visual aid. Self-drafted questionnaire was framed for recording responses based on the recommended consensual guidelines of experts regarding post surgical care of eye.

Formal approval was sought from the ethical review board of the worthy institute.

Informed consent was taken from all the participants. Confidentiality and privacy was maintained at all levels.

Data entry and statistical analysis were done using SPSS 18.0 statistical software package. Statistical significance was considered at p-value <0.05.

3. RESULTS:

All nurses in the study sample were females, with age ranging between 25 and 45 years (Table.1). The majority were married (84%), and carried a diploma in nursing (80%). Their total experience years ranged between 5 and 25 with median 15, whereas their experience in ophthalmology ranged between 1 and 15 years with median 8 years. Only 16% of the nurses reported having previously attended training courses.

Table.1 Socio-demographic characteristics of Nurses working in Ophthalmology

Variables	Frequency(n)	Percentage (%)
Age		
<30	34	68
>30	16	32
Range (25-45)		
Mean \pm SD (32 \pm 6.5)		
Median (33)		
Marital Status	42	84
Married	08	16
Unmarried		
Qualification		
Diploma	40	80
Bachelors	10	20
Experience in Ophthalmology		
<10 years		36
>10 years	18	64
Range (1.0-25.0)	32	
Mean \pm SD (11.4 \pm 6.2)		
Median (9)		
Taking Refresher Courses?	8	16

Table.2 demonstrates generally low percentages of satisfactory knowledge before implementation of the guidelines. The least satisfactory knowledge was regarding the anatomy of the eye (32.1%) and role of the nurse (44.1%) for cataract patients. On the other hand, more than three quarters of the nurses (79.4%) had satisfactory knowledge about cataract. At the post-guidelines phase, statistically significant improvements were noticed in nurses' knowledge, with all nurses having satisfactory knowledge in all areas ($p < 0.001$). This improvement persisted

During the follow-up period compared with baseline ($p < 0.001$), with slight no significant declines. The total satisfactory knowledge increased from 38.2% at baseline to 100% and 97.1% at the post and follow-up phases.

Table 2. Nurses' knowledge and practice throughout the intervention phases.

	Time						X ² (Pre-post)	X ² (Pre-FU)
	Pre (n=34)		Post (n=34)		FU (n=34)			
	No.	%	No.	%	No.	%		
Satisfactory knowledge (60%+) about:								
Eye anatomy	11	32.1	34	100.0	33	97.1	34.76 (<0.001*)	31.17 (<0.001*)
Cataract	27	79.4	34	100.0	33	97.1	Fisher (0.01*)	Fisher (0.054)
Nursing care	15	44.1	34	100.0	32	94.1	26.37 (<0.001*)	19.91 (<0.001*)
Discharge instructions	16	47.1	34	100.0	33	97.1	24.48 (<0.001*)	21.11 (<0.001*)
Total knowledge:								
Satisfactory	13	38.2	34	100.0	33	97.1	30.38	26.88
Unsatisfactory	21	61.8	0	0.0	1	2.9	(<0.001*)	(<0.001*)
Adequate practice (60%+) of:								
Instillation of eye drops	9	26.5	34	100.0	34	100.0	39.53 (<0.001*)	39.53 (<0.001*)
Applying ointment	0	0.0	34	100.0	34	100.0	68.00 (<0.001*)	68.00 (<0.001*)
Eye dressing	0	0.0	34	100.0	34	100.0	68.00 (<0.001*)	68.00 (<0.001*)
Eye care	1	2.9	34	100.0	34	100.0	64.11 (<0.001*)	64.11 (<0.001*)
Breathing and leg exercises	0	0.0	34	100.0	34	100.0	68.00 (<0.001*)	68.00 (<0.001*)
Non-pharmacologic pain relief	0	0.0	34	100.0	34	100.0	68.00 (<0.001*)	68.00 (<0.001*)
Psychological support	5	14.7	34	100.0	34	100.0	50.56 (<0.001*)	50.56 (<0.001*)
Total practice:								
Adequate	0	0.0	34	100.0	34	100.0	68.00	68.00
Inadequate	34	100.0	0	0.0	0	0.0	(<0.001*)	(<0.001*)

(*) Statistically significant at $p < 0.05$

Similarly, the table indicates that none of the nurses had adequate practice in applying ointment, eye dressing using infection control, breathing and leg exercises, and no pharmacologic pain relief before implementation of the guidelines. The post guidelines and follow-up phases showed statistically significant improvements in nurses' practices in all areas ($p < 0.001$). In total, none of the nurses had adequate practice, compared to 100% at both post and follow-up phases ($p < 0.001$).

Concerning the visual problems and achievement of needs among cataract patients, Table 3 shows decreases in the median number of visual problems from 3.5 at the pre-guideline phase to 2.0 at the post-

guidelines phase; however, this decrease was not statistically significant. Meanwhile, the medians of the scores of needs achieved demonstrated statistically significant improvements in all areas after guidelines' implementation ($p < 0.001$). The most prominent improvement were concerning performing daily life activities, medications, and pre-discharge instructions. In total, the median score of achieved needs increased from 16.0 at the pre-guidelines phase to 35.0 at the post-guidelines phase ($p < 0.001$).

The study findings revealed a statistically significant strong positive correlation ($r = 0.714$) between nurses' scores of knowledges and practice

Table.3 Comparison between pre and post guidelines score

	Time				p-value	
	Pre (n=50)		Post(n=50)			
	Mean±SD	Median	Mean±SD	Median		
Number of visual problems	3.4±2.3	3.50	3.0±2.3	2.00	1.92	0.16
Needs achieved:						
Diet	3.0±1.7	2.00	4.7±0.4	5.00	42.48	<0.001*
Sleep and rest	3.7±1.2	4.00	6.0±0.3	6.00	42.02	<0.002*
Daily Life Activities	0.0±0.3	0.00	3.4±0.8	4.00	54.76	<0.001*
Activities first week	1.3±0.8	2.00	3.5±0.7	4.00	48.87	<0.003*
Drugs	1.4±1.2	1.50	4.2±1.5	5.00	37.67	<0.001*
Psychological needs	4.2±2.2	4.50	5.6±1.0	5.00	15.95	<0.002*
Discharge instructions	1.6±0.7	2.00	5.9±0.3	6.00	55.64	<0.001*
Total needs achieved	14.5±4.5	16.00	33.3±3.5	35.00	51.93	<0.001*

(*) Statistically significant at $p < 0.05$

4. DISCUSSION:

Cataract surgery is a safe to perform outpatient procedure (Koolwijk et al, 2015). Due to rising number of cases worldwide there is a dire need for better healthcare service delivery structure including well versed staff to improve outcomes (Olali et al, 2010). The present study was a trial to examine the results of implementation of the nursing guidelines statistically significant outcomes in nurses' knowledge and practice, leading to better achievement of patients' needs post-operative surgical needs.

According to results, nurses' knowledge was on the lower side before implementation of the guidelines, especially about the anatomy and role of the nurse for cataract patients. This finding is identical with Belal (2004) who reported that nurses' knowledge of the anatomy and physiology of the eye was unsatisfactory. The implementation of the guidelines led to significant improvements in nurses' knowledge in all

areas, which went throughout the follow-up and later confirmed through multivariate analysis. A similar positive was demonstrated in a study in Tanzania (Mafwiri et al, 2014). Kearney et al (2006) recommended that nurses must learn the pathophysiology in adults which should be to ensure safety and obtain therapeutic goals.

A reciprocal relation was found between the age and the knowledge of the nurses, this might be because of the better utilization of the social media and the urge to learn.

One of the most unpredictable finding was that none of them could correctly perform the application of eye ointment, aseptic dressings, and non-pharmacologic pain management. This might be due to reflexes which build up by working around 25 years without validating their performance through evidence based practice. Hence, Tantawy (2004) stressed that when

the years of experience are increased, nurses have to learn more to update their knowledge, and skills.

Ahmed (2007) in a study at Zagazig University Hospital reported that more than three quarters of the nurses performed eye care incorrectly. Also, Stollery et al (2008) emphasized the importance of adopting aseptic measures during the application of eye dressing. Moreover, Mohamed (2008) revealed negligence during unclear and incomplete verbal instructions to patients at discharge. On the contrary, the role of nurses in pain relief after cataract surgery has been demonstrated with pride in Mayo clinic (Erie et al, 2011).

Thus, the practical training element, in addition to the theoretical part is in accord. Lin et al (2013) stressed that nurses should pay due attention to systemic evaluation of the patients, health education, psychological support, which is the key to ensure the safety of patients.

CONCLUSIONS AND RECOMMENDATIONS:

It is concluded that by implementing recommended consensus of guidelines for post operative cataract surgery patients is effective in optimizing knowledge, practice and orientation in nurses for attainment of patient centered healthcare goals. Therefore, it is recommended that these guidelines must be utilized in clinical settings. Further research is proposed to examine the effects of the nursing guidelines on minimizing the incidence of post operative cataract complications.

REFERENCES:

- [1] Abraham A. G., and Condon N. G. (2006): The New Epidemiology of Cataract. *Ophthalmol Clin J*; 19(1): 415–425. Available at: www.unisinucartagena.edu.co
- [2] Adepoju F. G., Ayanniyi A. A., Pam V., and Akanbi T. B. (2011): Human resource development for Vision 2020 in developing countries: a change from absolute numbers. *Eur J Ophthalmol*;21(6):820-5.
- [3] Ahmed M. (2007): Assessment of Patients Needs, Nurses Role in Caring Children with Ophthalmic Disorder, Unpublished Master Thesis, Faculty of Nursing, Ain Shams University.
- [4] Ahmed S. A. (2007): Study of Nurses Performance Regarding Infection Control for Patients with Central Venous Catheter, Unpublished Master Thesis, Faculty of Nursing Zagazig University.
- [5] American College of Eye Surgeons (ACOES), (2013): “Guidelines for Cataract Practice” [Ehttp://www.acesabes.org/guidelines_for_cataract_practice.htm](http://www.acesabes.org/guidelines_for_cataract_practice.htm) Available at. 2/8/2013 at 7.17 pm.
- [6] Bare B. G., and Smeltzer S. C. (2004): Brunner and Suddarth Textbook of Medical Surgical Nursing. 10th ed., Philadelphia: Lippincott Williams and Wilkins, Awolters Kluwer, p. 605.
- [7] Belal S. A. (2004): Postoperative Self – Care Guide for Patient with Intraocular Surgery. Unpublished Master Thesis, Faculty of Nursing, Ain Shams University, p. 5430 .
- [8] Casparis H., Lindsley K., Kuo I., Sikder S., and Bressler N. (2012): Cataract surgery in people with age-related macular degeneration. *The Cochrane Collaboration*; 11(6): 35 – 9.
- [9] Cooper A., Endacott R., and Jevon P. (2009): *Clinical Nursing Skills Core and Advanced*. 1st ed. USA: Oxford University Press Co, p. 80
- [10] Elsabagh NS. (2012): Patients Undergoing Laparoscopic Cholecystectomy: Needs Assessment, Unpublished Master Thesis, Faculty of Nursing, Ain Shams University.
- [11] Erie A. J., McHugh R., Warner M., and Erie J. C. (2011): Model of anesthesia care that combines anesthesiologists and registered nurses during cataract surgery. *J Cataract Refract Surg*;37(3):481-5.
- [12] Hegazy S. M., Ragheb M. M., Elsayed N. O., and Rashad M. A. (2012): Health Needs Managements Among Patients Undergoing Day Case Cataract Surgery. Proposed protocol, *life science Journal*; 9(2): 1316-1327. Available at: <http://www.lifesciencesite.com>.
- [13] Kearney N., Richardson A., and Foubert J. (2006): *Nursing patient's with eye disease: Principles and Practice*. Philadelphia: Churchill Livingston El Sevier Co, pp. 393-399.
- [14] Koolwijk J., Fick M., Selles C., Turgut G., Noordergraaf J. I., Tukkers F. S., and Noordergraaf G. J. (2015): Outpatient cataract surgery: incident and procedural risk analysis do not support current clinical ophthalmology guidelines. *Ophthalmology*;122(2):281-7.
- [15] Lin J., Fang X., and Wu S. (2013): The management pattern carried out in a cataract surgery day ward. *Eye Sci*;28(2):79-83.
- [16] Mafwiri M., Kisenge R., and Gilbert C. E. (2014): A pilot study to evaluate incorporating eye care for children into reproductive and child health services in Dar-es-Salaam, Tanzania: a historical comparison study. *BMC Nurs*;13:15.

- [17] Mansfield A., Nathanson V., Jayesinghe N., and Foyle G. (2011): The psychological and Social Needs of patients. British Medical Association; 26(4): 1-3. Available at: http://www.bma.org.uk/images/psychologicalsocialneeds_patients_tcm41
- [18] McCann S., and Judith A (2009): Lippincott's Nursing Procedures. 5th ed., USA: Lippincott Williams & Wilkins Wolter Kluwer Health, pp. 282-285.
- [19] Miller C. (2009): Vision in Nursing for Wellness older Adults. 5th ed., China: Lippincott Williams & Willinks Co., p. 344
- [20] Mittelman, W. (1991). "Maslow's study of self-actualization: A reinterpretation". Journal of Humanistic Psychology 31 (1): 114–135. doi:10.1177/0022167891311010
- [21] Mohamed Y. (2008): Effect of Educational Program on Nursing Performance in Ophthalmic Laser, Unpublished Doctoral Thesis, Faculty of Nursing, Ain Shams University.
- [22] Nirmalan P. K., Tielsch J. M., and Robin A. L. (2005): Relation between Vision Impairment and Eye Disease to Vision - Specific Quality of Life and Function in Rural India. The Aravind Comprehensive Eye Survey, Aravind Medical Research Foundation; 46(7): 2308-2312.
- [23] Olali C. A., Priya A., Gupta M., and Ahmed S. (2010): Cataract surgery in the United Kingdom: a postal survey. Eur J Ophthalmol.;20(4):684-6.
- [24] Polack S., Kuper H., Mathenge W., Fletcher A., and Fosrer A. (2007): Cataract Visual Impairment and Quality of Life in Kenya Population. BJ Ophthalmol; 91(7): 927-932. Available at www.ncbi.nlm.nih.gov/pubmed/17272387 bjo.bmj.com/content/91/7/927.pdfhtml.
- [25] Potter P., and Perry A. (2001): Fundamental of Nursing. 5th ed. USA: Mosby, pp. 1655-1657.
- [26] Randleman J. (2014): Cataract Surgery, http://www.medicinenet.com/cataract_surgery/article.htm [Medically Reviewed by a Doctor on 1/30/2014] MedicineNet.com.
- [27] Steere, B. F. (1988). Becoming an effective classroom manager: A resource for teachers.. Albany, NY: SUNY Press. ISBN 0-88706-620-8
- [28] Stollery R., Shaw M., and Lee A. (2008): Ophthalmic Nursing. 3rd ed., India: Black Well Co, p.15.
- [29] Surrena H. (2009): Handbook for Brunner and Suddarth's Textbook of Medical Surgical Nursing, 10th ed., Philadelphia: Lippincott Williams and Willinks, p. 214
- [30] Tantawy N.M. (2004): Development of Nursing Care Standards for Emergency Surgical Patients, Unpublished Doctoral Thesis, Faculty of Nursing, Ain Shams University.
- [31] Trent D., and Albright M. D.(2014): Patient Information For Before & After Cataract Surgery About The Procedure, 89 E Wilson Bridge Rd, Worthington, OH 43085, 614 -401-9927 <http://www.worthingtoneye.com/files/public/docs/pre-postop-cataract-surgery-instructions.pdf> 19/11/2014 at 6.18 pm
- [32] Vincent J., and Patalano I. (2012): The Risks and Benefits of Cataract Surgery. Digital Journal of Ophthalmology; 3 (7): 23- 5.
- [33] World Health Organization (2013): Prevention of Blindness and Visual Impairment: Priority Eye Diseases, <http://www.who.int/blindness/causes/priority/en/index1.html> [Accessed January 4, 2013].