

Patient's Self -Care Practices after Cataract Surgery at Giza Memorial Institute for Ophthalmic Research

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Abstract

Background: Cataract is a clouding of the eye's lens. Patient's self- care after cataract surgery are activities that can lead to a high success rate in improving eyesight and allowing patients to return to normal activities. **Aim:** This study aimed to assess patient`s self -care practices after cataract surgery at Giza Memorial Institute for Ophthalmic Research. **Design:** Descriptive exploratory research design was utilized. **Setting:** The study was conducted at Ophthalmology Department in (Giza Memorial Institute for Ophthalmic Research). **Sample:** A purposive sample of 131 adult patients was included in the study. **Tools:** Three tools were used in this study; **Tool I:** patient's structured interview questionnaire. **Tool II:** patient`s knowledge questionnaire regarding self-care after cataract surgery . **Tool III:** patient`s self-care practices after cataract surgery . **Results:** the study results revealed that about two thirds of the studied patients were in age group 50 - 60 years old. Almost two thirds of the studied patients had unsatisfactory total knowledge regarding self-care after cataract surgery, while, majority of them had high self-care compliance across the first ,second and fourth post-surgery day . **Conclusion:** The present study revealed that more than one third of the studied patients had satisfactory total knowledge regarding self-care after cataract surgery ,as well majority of them had high self-compliance on the first ,second and fourth post-surgery day . **Recommendation:** Conduct a health education program should be prepared for the patients undergoing cataract surgery and their families about the disease, postoperative care and prevention of cataract surgery complications.

Keywords: *Cataract Surgery , Patients, Self-Care Practices.*

Introduction

A cataract is a clouding of the eye's lens, which prevents light rays from passing through and focusing on the retina, a sensitive tissue lining in the back of the eye. Cloudiness occurs when the protein in the lens changes, affecting the eye's vision making it harder to see. If less light reaches the retina, vision becomes dull and blurry. There are various types of cataracts, including age-related, congenital, secondary, and traumatic (Hsueh et al., 2022) .

Cataracts are conditions characterized by cloudy, blurry, foggy, or filmy vision, changes in color perception, sensitivity to bright sunlight, glare, difficulty seeing at night, changes in vision prescription, needing brighter light to read, and double vision. Although cataracts don't usually hurt, they can cause discomfort by making the eyes more sensitive to light. The main cause of cataracts is the gradual breakdown of proteins in the lens. Risk factors for cataract formation fall into three main groups: environmental, medical, and genetic (Mencucci et al., 2023) .

Preventing cataracts involves avoiding tobacco smoke, protecting eyes from the sun, and maintaining regular eye care. Early symptoms may not require surgery, but if they interfere with daily life, surgery may be recommended. To take care of oneself with cataracts, wear polarized sunglasses, use magnifying glasses, add brighter lightbulbs, avoid night driving, see eye care providers regularly, and manage underlying medical

conditions. If symptoms of cataracts or vision changes occur, contact a healthcare provider for appropriate treatment (**Kang et al., 2023**).

The management of cataract varies based on the severity of the disease, visual impairment, and age of the patient. The main treatment is usually surgical cataract extraction, with mild patients receiving outpatient treatment with refractive glasses and pupillary dilatation. Patients with more severe disease or advanced age should be advised for elective surgery. If refractive glasses and pupillary dilatation do not improve, patients should undergo hospitalization for surgical cataract removal with intraocular lens implantation. An interdisciplinary team approach is required for diagnosis and treatment of cataracts, including primary care providers, specialists, and nursing support, to ensure timely and effective patient care and optimal outcomes (**Wevill, 2023**).

Patient self-care after cataract surgery is an activity that can lead to a high success rate in improving eyesight and allowing patients to return to normal activities, such as driving. However, it may take a few days for the vision to fully recover. Side effects like grittiness, watering, blurred vision, double vision, and a red or bloodshot eye may occur, which usually improve within a few days but can take 4 to 6 weeks to fully recover. If patient experience increased pain and/or redness, contact the eye surgery department immediately (**Boyd, 2022**).

Self-care is the practice of being mindful of and attending to one's specific physiological and emotional needs regularly, such as determining one's daily routine, use eye drops after surgery. By following doctor's instructions follow the instructions for using eye drops, taking it easy for the first few weeks after surgery using the eye shield at night for at least a week, taking painkillers if needed, bathing or showering as usual, wearing the eye shield when washing hair, reading, watching TV, using a computer, using the shield, sunglasses outdoors, and avoiding swimming for 4 to 6 weeks. Don't rub the eye, allow soap or shampoo to get into the eye, drive until get all-clear from the doctor (**Mencucci et al., 2023**).

Significant of study

Cataract disease can lead to major negative effects on the quality of people's lives. It is called "disease of aging" and considered the leading cause of reversible visual impairment worldwide, affecting 95 million people globally. Cataract can be treated by surgical removal of the cloudy lens and replacement with an artificial intraocular lens. Patients' independence in self-care and efficiency of activities of daily living (ADL) may be harmed as a result of this condition, resulting in lower quality of life. If a cataract surgery patient receives insufficient or inadequate knowledge of post-operative care after surgery, numerous complications will occur at any time. The most common concerns were daily activities, complications, medications administration, and follow-up (**Shicheng & Samuel., 2019**).

Cataracts are most common in White Americans, with a rate of 17-18% per 100 people. Blacks are the second most affected, with a 13% prevalence rate. Onset is more common in older adults, typically in the fifth and sixth decade, but can also occur in children and the elderly. Women are more likely to be affected, with a male-to-female ratio of 1 to around 1.3 (**Patnaik et al., 2024**).

In Egypt, there are approximately 1 million unsighted peoples, and 3 million are visually impaired. Nearly 60% of the visually impaired in Egypt have cataracts. Poor vision affects 47.9% of the Egyptian population of all ages, with cataracts being the leading cause of blindness cataract is a significant and increasing global as well as local problem (**WHO, 2019**).

According to Statistical Department Report at Giza Memorial Institute for Ophthalmic Research, the number of patients undergoing cataract surgery was approximately 200 in 2022 (**Statistical center, 2022**). The necessity of this study arises from the growing number of patients undergoing cataract surgery and their need for proper self-care after cataract surgery. Additionally, there is a lack of research focusing on this area, with most attention being given to nursing practices rather than patient self-care.

Aim of the study:

The aim of this study was to assess patient's self-care practices after cataract surgery at Giza Memorial Institute for Ophthalmic Research through the following objectives:

1. Assess level of patient's knowledge regarding self-care after cataract surgery.
2. Assess level of patient's self-care practices after cataract surgery

Research questions:

Q 1 – What is the level of patient's knowledge regarding self-care after cataract surgery?

Q 2_What are the patient's self-care practices level after cataract surgery?

Subjects and methods:

A descriptive exploratory research design was utilized to achieve aim of the study.

Research setting

The study was conducted at Ophthalmology department in (Giza Memorial Institute for Ophthalmic Research). Ophthalmology department is located at second floor ,contain of two units(female unit and male unit). The capacity of two units included 43 beds+1 isolation room.

Research subjects

Sampling:

Type of sample

A purposive sample of 131 patients, from total 200 attended in the above mention setting in previous year.

Inclusion criteria:

- Adult patients from both sex.
- Patients who are undergoing cataract surgery for first time in postoperative period.

Exclusion criteria:

- Patients who have unstable and uncontrollable chronic disease.
- Unable to communicate.

Tools for data collection

Data were collected using the following tools:

Tool (I): Patient's structured interview questionnaire : This tool was developed by the investigator based on review the related literature (Elgazar et al., 2017; Abid et al., 2018 ;Desoky et al., 2024) It was filled in by the investigator included the following two parts:

Part 1: Patient's demographic data: it included patient's age, gender, marital status, occupation, type of work ,educational level.

Part 2: Patient's current and past history: It was used to assess the patient Current history as smoking, allergy, eye allergy, eye inflammation, current medication. Past medical and surgical history as the presence of chronic diseases , family history of cataract and any previous history of general surgery.

Tool (II): Patient's knowledge questionnaire regarding self-care after cataract surgery: It was adapted from (Samuel et al ., 2021) the investigator modified the questionnaire by removing some items and modifying the wording of the items and the scoring system to assess knowledge of patient's self-care after cataract surgery. It consisted of 22 questions inform of true and false question included simple meaning of cataract, causes, risk factors, signs &symptoms, ways of prevention, complication after cataract surgery, follow up ,exercises and diet after cataract surgery.

Scoring system

For knowledge scoring, the correct answer received a score of (1), while an incorrect answer received a zero score. The scores of the items was added together for each field of information, and the sum was divided by the number of items, yielding a mean score for the section. These numbers was translated to a percentage. Knowledge was counted as unsatisfactory if the percent score was 60 % or less, satisfactory if the percent score was more than 60% (Abid et al ., 2018) .

Tool (III): Patient's self-care practices after cataract surgery: It was adapted from (Choi, 2013) and the investigator modified the Patient's observational checklist for by removing and adding some items and modifying the wording of the items and the scoring system to assess postoperative patient's self-care practices. It consisted of (3) main items regarding use medication administration consisted of 13items (eye drops &eye ointment), hygiene consisted of 3 items, protection of operation site consisted of 6 items ..so total number of items 22 in form of 3points likert scale as never (0),sometimes (1) and always(2) .

Scoring system: It consisted of 22 statements on 3 points likert scale (0=never ,1=sometimes ,2=always).Total score ranged from 0to44 and were categorized as :low self-compliance if it ranges from 0 to less than 14 . Moderate self-compliance if it ranges from 14 to less than 28 .higher self-compliance if it ranges equal and more 28 (Cho & Rho, 2015) .

**Validity:**

Face validity aimed to determine whether the tools measure what were supposed to measure (Mueller & Knapp, 2018). Content validity was conducted to determine whether the tools covered the aim, test its appropriateness, comprehensiveness, accuracy, correction, clearance, and relevance through a jury of 5 experts (assistant professors of medical surgical nursing) from the Faculty of Nursing-Helwan University. Their opinions were elicited regarding tools consistency, rephrasing for some statements and scoring system. Ethics, values, culture, and beliefs were respected.

Reliability :

Cronbach's Alpha was used to determine the internal reliability of the developed tool. Reliability of the tools was tested to determine the extent to which the tools items are related to each other. Reliability score for patient's knowledge questionnaire regarding self-care after cataract surgery was 0.748 and for patient's self-care practices questionnaire was 0.818. Cronbach alpha values of 0.7 or higher indicate acceptable

Pilot study:

The pilot study was done on 10% (13 patients) of the sample to examine the clarity of questions and time needed to complete the study tools. Subjects included in the pilot study weren't excluded from the study sample because no modification in the tools were done.

Field work included the following:

- An approval was obtained from the Scientific Ethical Committee of Faculty of Nursing- Helwan University and the study subjects.
- Once the permission was obtained, the investigator was interviewed with the patients and explained the aim of the study and took their approval to participate and cooperate in the study through oral consent. Purpose of study was simply explained to the patients who agreed to participate in the study prior to any data collection.
- Data collection of the study was started and completed within six months in the period from beginning of November 2023 to the end of April 2024.
- The investigator visited the ophthalmology department within three day each week on Monday, Tuesday and Wednesday in the morning and afternoon shift.
- The data was collected by the investigator throughout assessing patients' demographic data, medical and surgical history (tool I), patient's knowledge questionnaire regarding self-care after cataract surgery (tool II) and patient's self-care practices questionnaire (tool III).
- On the first day after cataract surgery, the investigator conducted interviews with 5 to 6 patients daily in the Ophthalmology department at the Memorial Institute for Ophthalmic Research. On the second day post-surgery, the investigator interviewed the same 5 to 6 patients daily in the emergency department. On the fourth day after surgery, the investigator conducted interviews with the same group of 5 to 6 patients daily at the cataract clinic.
- The study tools were filled in and completed by the investigator in 1st day, 2nd day, 4th day post cataract surgery. The total time needed for patient's structured interviewing questionnaire, patient's knowledge questionnaire regarding cataract surgery and patient's self-care practices after cataract surgery ranged from 30-45 minutes to answer all questions.

Ethical considerations:

An official permission to conduct the proposed study was obtained from the Scientific Research Ethics Committee of the Faculty of Helwan University. Participation in the study was voluntary and subjects were given complete full information about the study and their role before signing the informed consent. The ethical considerations were included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it wasn't be accessed by any other party without taking permission of the participants. Ethics, values, culture, and beliefs were respected.

Statistical Item:

Completion of data collection, collected data were organized, tabulated and analyzed using Statistical Package for Social Science (SPSS), version 26 for analysis. For quantitative data, numbers, percentage, mean, and standard deviation (SD) were used to describe results. For qualitative data which describe appropriate inferential statistics such as chi square test was used as well. categorical set of data, frequency and percentage of

each category were calculated. Appropriate significance was adopted at $P < 0.05$ for interpretation of results (Siregar, 2021). The observed associated differences were considered as not significant if $p > 0.05$ and highly significant if $p < 0.001$.

Results:

Table (1): Percentage distribution of the studied patients according to their demographic data (n=131).

Items		No	%
Age	20 to less than 30 years	3	2.3
	30 to less than 40 years	3	2.3
	40 to less than 50 years	42	32.1
	50-60 years	83	63.4
Mean \pm SD	50.98 \pm 6.334		
Gender	Male	46	35.1
	Female	85	64.9
Marital status	Single	10	7.6
	Married	94	71.8
	Divorced	5	3.8
	Widower	22	16.8
Occupation	Working	38	29.0
	Not working	93	71.0
Type of work (n= 38)	Official work	25	65.8
	Manual work	13	34.2

Table (1) reveals that, 63.4% of the studied patients were in age group 50 - 60 years old with a mean age 50.98 \pm 6.334. 64.9% of the studied patients were females.

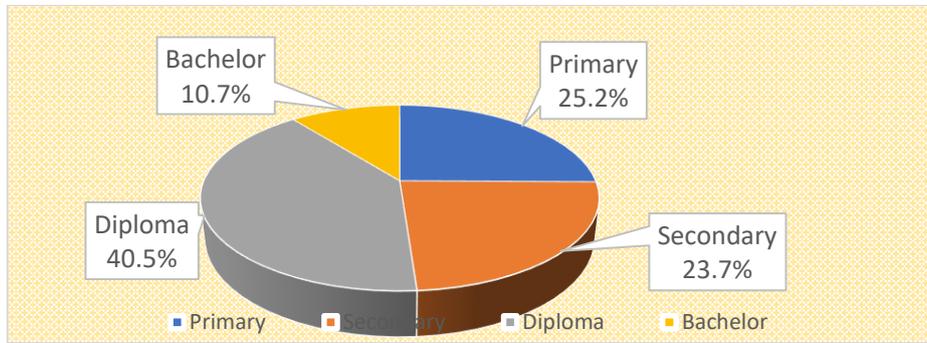


Figure (1): Percentage distribution of the studied patients according to their educational level (n=131).

Fig (1) illustrates that, 40.5% of the studied patients had diploma, while 10.7% had bachelor degree.

Table (2): Percentage distribution of the studied patients according to their current history (n=131).

Current history		No	%
■ Smoking	Yes	9	6.9
	No	122	93.1
■ Number of years you have smoked (n=9)	Less than 10 years	2	22.2
	10 - < 20 years	4	44.5
	20 years or more	3	33.3
■ Number of cigarettes do you currently smoke per day (n=9)	\leq 10 cigarettes	4	44.5
	11- 20 cigarettes	4	44.5
	More than one pack	1	11.0

■ Allergy	Yes	10	7.6
	No	121	92.4
■ Type of allergy (n=10)	Drug	1	10.0
	Food	9	90.0
■ Eye allergy	Yes	131	100.0
	No	0	0.0
■ Eye inflammation	Yes	131	100.0
	No	0	0.0
■ Current medication	Yes	40	30.5
	No	91	69.5
■ Medication dose (n=40)	15 units	1	2.5
	One tablet	36	90.0
	Three tablets	2	5.0
	2.5 – 8 mg	2	5.0
■ Medication route (n=40)	Oral	39	97.5
	Subcutaneous	1	2.5
	Inhalation	2	5.0

Table (2) demonstrates that, 93.1% of the studied patients weren't smokers. Also, 92.4% of the studied patients hadn't allergy. 90% of them had food allergy and all of them had eye allergy and eye inflammation respectively.

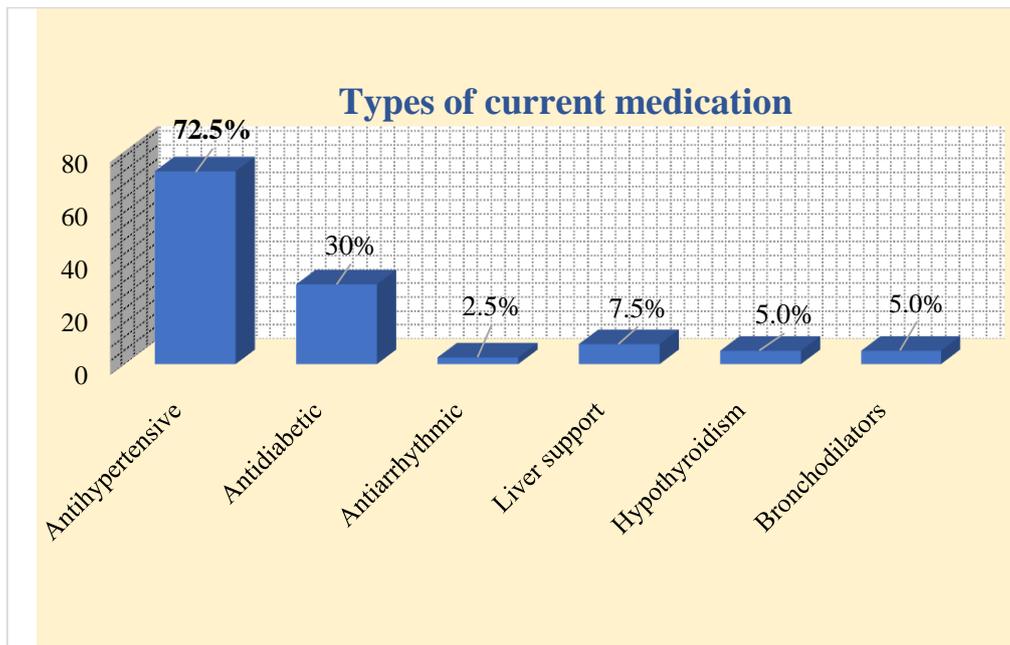


Figure (2): Percentage distribution of the studied patients according to their type of current medications (n=40).

Fig (2) illustrates that, 72.5% and 30% of the studied patients take antihypertensive and antidiabetic medications respectively. While 2.5% of them take antiarrhythmic medications.

Table (3): Percentage distribution of the studied patients according to their past medical and surgical history (n=131).

Past medical and surgical history		No	%
Chronic disease	Myocardial infarction	0	0.0
	Hypertension	45	34.3
	Diabetes mellitus	30	23
	Stroke	0	0.0
	Rheumatoid	0	0.0
	Chronic kidney failure	9	6.9
	Asthmatic	1	0.8
	Breast cancer	1	0.8
	Cushion gold syndrome	2	1.5
	Liver cirrhosis	5	3.8
Family history of cataract	Yes	11	8.4
	No	120	91.6
Pervious history of general surgery	Yes	28	21.4
	No	103	78.6

Table (3) reveals that, 34.3% and 23% of the studied patients had history of hypertension and diabetes mellitus respectively. 91.6% of the studied patients hadn't family history of cataract. While, 78.6% of them had no history of general surgery.

Table (4): Percentage distribution of the studied patients according to their knowledge regarding self-care after cataract surgery (n=131).

Items	Correct		Incorrect	
	No	%	No	%
▪ Cataract is clouding of the lens in the eye that affects vision	80	61.1	51	38.9
▪ Cataract is the medical term for subconjunctival hemorrhage	128	97.7	3	2.3
▪ Using long term cortisone is one of the causes of cataract	15	11.5	116	88.5
▪ Age and diabetes are causes of cataract	82	62.6	49	37.4
▪ Eye trauma is one of the causes of cataract	18	13.7	113	86.3
▪ Prolonged exposure to sunlight is a risk factor of cataract	20	15.3	111	84.7
▪ Clouded, blurred or dim vision and trouble seeing at night are the signs and symptoms of cataract	129	98.5	2	1.5
▪ Sensitivity to light and fading or yellowing of colors are the signs and symptoms of cataract	131	100.0	0	0.0
▪ Frequent changes in eyeglass or contact lens prescription and halos around light are the signs and symptoms of cataract	122	93.1	9	6.9
▪ Cataract cannot be prevented	41	31.3	90	68.7
▪ Wear sunglasses with 100% UV protection and avoid smoking are the measures to avoid cataract formation	17	13.0	114	87.0
▪ Wear protective eyewear to protect eye from getting accidentally injured is one of the measures to avoid cataract formation	20	15.3	111	84.7
▪ Decrease long use of steroid are the measures to avoid cataract formation	22	16.8	109	83.2
▪ Cataract can lead to blindness	91	69.5	40	30.5
▪ Surgery is the only treatment to cure cataracts	124	94.7	7	5.3
▪ Intraocular lens dislocation and posterior capsular opacification are considered complications after cataract surgery	47	35.9	84	64.1
▪ Endophthalmitis is one of the complications after cataract surgery	45	34.4	86	65.6

<ul style="list-style-type: none"> Posterior vitreous detachment is one of the complications after cataract surgery 	10	7.6	121	92.4
<ul style="list-style-type: none"> Visiting on the selected date for follow up after surgery and avoiding driving are considered the daily living activities for patients after cataract surgery. 	127	96.9	4	3.1
<ul style="list-style-type: none"> Restriction of heavy exercises and restriction of these activities in the initial week. 	125	95.4	6	4.6
<ul style="list-style-type: none"> Vision may be blurry for several days after cataract surgery 	89	67.9	42	32.1
<ul style="list-style-type: none"> A healthy diet may help to reduce risk for complication after cataract surgery. 	84	64.1	47	35.9

Table (4) demonstrates that 97.7%, 98.5% and 100% of the studied patients had correct knowledge about cataract is the medical term for subconjunctival hemorrhage, clouded, blurred or dim vision trouble seeing at night and sensitivity to light and fading or yellowing of colors are the signs and symptoms of cataract respectively. However, 88.5%, 87% and 92.4% of the studied patients had incorrect knowledge about using long term cortisone is one of the causes of cataract, wearing sunglasses with 100% UV protection and avoiding smoking are the measures to avoid cataract formation and posterior vitreous detachment is one of the complications after cataract surgery respectively.

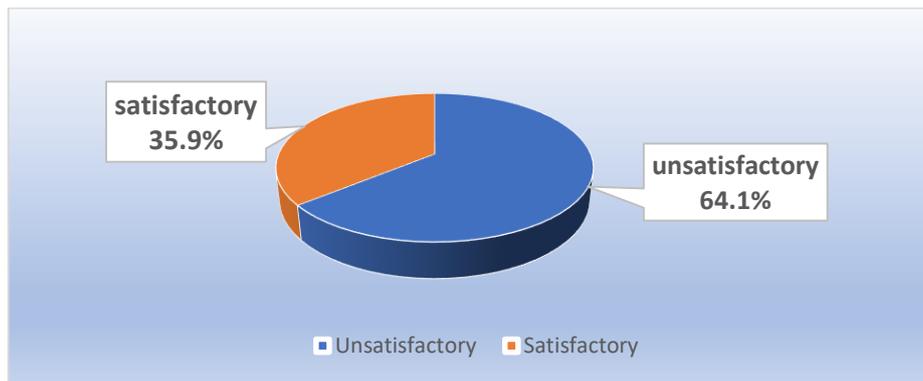


Figure (3): Percentage distribution of the studied patients according to their total level of knowledge regarding self-care after cataract surgery (n=131).

Fig (3): demonstrates that 35.9% of the studied patients had satisfactory total level of knowledge regarding self-care after cataract surgery, while, 64.1 % of them had unsatisfactory total level of knowledge regarding self-care after cataract surgery.

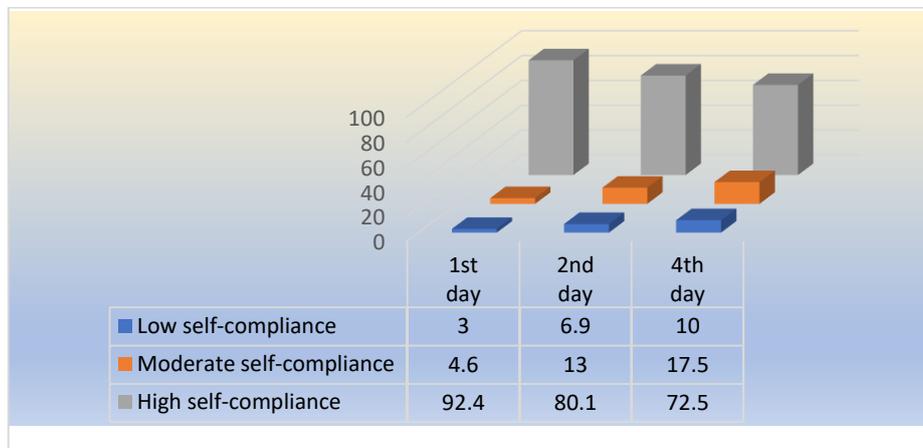


Figure (4): Percentage distribution of the studied patients according to their total level of practices regarding self-care after cataract surgery (n=131).

Fig (4): illustrates that 3%, 6.9% and 10% of the studied patients had low self-compliance regarding self-care practices after cataract surgery on the first, second and fourth post-surgery day respectively, while, 92.4%, 80.1% and 72.5% of them had high self-compliance on the first, second and fourth post-surgery day respectively.

Table (5): Correlations between total level of knowledge of the studied patients and their total level of practices after cataract surgery (n=131).

Practice		Total knowledge
Total practices on the first day	Pearson Correlation	0.251
	P value	0.281*
Total practices on the second day	Pearson Correlation	0.204
	P value	0.271
Total practices on the fourth day	Pearson Correlation	0.316
	P value	0.452

* Not significant if P Value >0.05

Table (5): shows that there was no statistically significant correlation between total level of knowledge of the studied patients and their total level of practices on the first , second and fourth post-surgery day with with p-value > 0.05.

Discussion

Regarding to demographic characteristics of the studied patients; the result of the present study revealed that about two thirds of the studied patients were in age group 50 - 60 years old . .As regards gender, the present study clarified that almost two thirds of the studied patients were females. This study result is in agreement with **Mohamed et al., (2023)**,in study titled who "Effectiveness of the preoperative educational guidelines for patients undergoing cataract extraction surgery and intraocular lens implantation. and reported that two thirds of patient's age run among 60 – 65 years old. Furthermore. This result is in accordance with **Desoky et al., (2024)** who found in study about " Effect of nursing intervention guidelines on knowledge and self-care practices among adult patients undergoing cataract surgery " and reported that two third of the studied patients were females. From the investigator point of view ,this may be due to cataract is more prevalent among older individuals, particularly those above 50 years and decline level of estrogen at menopause cause increased risk of cataract in women.

Concerning marital status, this study result revealed that more than two thirds of the studied patients were married. This finding goes in the same line with Kumar et al., (2023), who found that over two-thirds of the studied patients were currently married.

Concerning occupation, this study result revealed that less than one third of the studied patients were working and more than two thirds of them were not working. And about two thirds of them had official work. These findings in line with **Mohamed et al., (2023)**, who reported that the majority of participation were house wives and illiterate. From the investigator point of view ,this may be due to about two thirds of the studied patients were in age group 50-60years ,This made them not need to work due to financial stability from savings, pensions, or support from their spouse or family members, related to the availability of opportunities for government jobs back then.

Concerning educational level, less than half of the studied patients had diploma, while tenth had bachelor degree. These findings are in disagreement with **Kumar et al., (2023)** who found that over two-thirds were currently uneducated. From the investigator point of view ,this may be rationalized as in the past there was no interest in education so, illiteracy was common among elderly that lead to lack of health awareness and more prone to certain health conditions but that individuals with higher education levels have greater health awareness and adopt healthier practices that reduce the risk of diseases. They may also have better access to preventive medical services.

According to smoking and allergy, this study result revealed that most of the studied patients were not smokers, more than two fifth of them were smoking from 10 to less than 20 years and were smoking 11- 20 cigarettes per day as personal habit. Also, most of the study patients hadn't allergy. Most of them had food allergy and all of them had eye allergy and eye inflammation. This study finding is consistent with **Taha,(2021)** in a study entitled "Effectiveness of nursing intervention protocol on nurses' performance and patients' self-care after cataract surgery ", who found that most of the studied patients were not smokers and most of them had eye allergy and eye inflammation . While, this study finding is contraindicated with, **Nassar et al., (2024)** who mentioned that two thirds of study group were smokers and most of them had no history of eye allergy and eye inflammation . From the investigator point of view ,this may be due to the patients who smoke more than one pack daily and long smoking duration could be a contributing factor to developing eye problems such as inflammation and allergies.

Regarding current medication of the studied patients, this study result found that less than one third of the studied patients take medication and most take one tablet orally. Less than three quarter and less than one third of them take antihypertensive and antidiabetic medications this study result agrees with **Desoky et al., (2024)** who stated that, one third of the studied patients take medication and less than one third of them take antidiabetic medications.

According to past medical history, this study result revealed that more than one third and one quarter of the studied patients had history of hypertension, diabetes mellitus . This result agrees with **Mohamed et al., (2023)** who revealed that less than fifth of the studied patients had diabetes mellitus and hypertension. Also, these findings in line with **Taha, (2021)** who found that less than fifth of the studied patients had history of hypertension and three fifth of them had history of diabetes mellitus.From the investigator point of view ,this may be as a result of ageing accompanied with increase in the prevalence of systemic chronic diseases mainly HTN and DM that lead to pathologies in many tissues in the eye structure.

According to family and surgical history of the studied revealed that most of the studied patients hadn't family history of cataract. While, majority of them had no history of general surgery. These study results are In disagreement with **Mohamed et al., (2023)** revealed that the majority of the studied patients had family history of cataract. As well, in contrast **Nassar et al., (2024)** , who reported that all of the studied patients had cataract in the past medical history. Regarding past surgical history, majority of study group had previous cataract surgery.

According to knowledge regarding self-care after cataract surgery ,this study result revealed that most of the studied patients had correct knowledge about cataract is the medical term for subconjunctival hemorrhage, clouded, blurred vision, trouble seeing at night and sensitivity to light and fading or yellowing of colors are the signs and symptoms of cataract. However, majority of the studied patients had incorrect knowledge about using long term cortisone is one of the causes of cataract, wearing sunglasses with 100% UV protection and avoiding smoking are the measures to avoid cataract formation and posterior vitreous detachment is one of the complications after cataract surgery.

This study result disagrees with **Beth, et al. (2015)**, in study entitled " A study to assess the knowledge on post-operative self-care activities among patients who have undergone cataract surgery at a selected hospital, malaysia " ,who found that all subjects had adequate knowledge on handling eye medication and that the tip and lid of the bottle should not touch any area or the eye ball as this might cause infection. Also, all the participants were aware on the importance of seeking doctor's advice after surgery when they have increase in pain, discharge and redness. From investigator point of view, this may be due to patients might easily identify the common symptoms of cataracts, they may not have received enough targeted education regarding the lifestyle factors that contribute to cataract formation or the potential complications of cataract surgery.

Concerning satisfactory total level of knowledge, this study demonstrated that more than one third of the studied patients had satisfactory total level of knowledge regarding self-care after cataract surgery, while, almost two thirds of them had unsatisfactory total level of knowledge regarding self-care after cataract surgery. This study result are inconsistent with, **Desoky et al., (2024)**, who stated that tenth of the studied patients had satisfactory total level of knowledge after cataract surgery, while, majority of them had unsatisfactory total level of knowledge after cataract surgery. Similarly, the current study is in disagreement with **Mohamed et al., (2018)** who mentioned in study about " Assessment of knowledge and quality of life for patients undergoing

cataract surgery". They reported that about less than fifth of respondents had good level of knowledge, more than one third had moderately adequate level of knowledge, and more than two fifth had poor level of knowledge about eye care after cataract surgery .From investigator point of view, the high proportion of patients with unsatisfactory knowledge regarding self-care after cataract surgery could stem from factors such as insufficient patient education, variability in communication quality, challenges in patient adherence, and possible issues with health literacy.

Concerning total level of practices regarding self-care after cataract surgery ,this study demonstrated that the majority of patients in this study had high self-compliance regarding self-care after cataract surgery on the first, second and fourth post-surgery day and the minority of the studied patients had low self-compliance regarding self-care practices after cataract surgery on the first, second and fourth post-surgery day. The study results are in agreement with **Desoky et al., (2024)** regarding overall post-operative level of self-care practices, minority of the studied patients had low self-compliance while most of them had high self-compliance. From investigator point of view this may be due to their understanding of the importance of recovery, clear communication from healthcare providers, and motivation to recover.

According to correlations between total level of level of knowledge of the studied patients and their total level of practices after cataract surgery, these study results found that there was no statistically significant correlation between total level of knowledge of the studied patients and their total level of practices on the first, second and fourth post-surgery day. These study results are supported by **Pankasikorn&kitsripisarn,(2018)** who found that there was no significant relationship between knowledge, attitude and self-care behaviors of the studied patients.

These study results are in disagreement with **Yotkhamlue,(2023)** in a study entitled " Factors affecting postoperative self-care behaviors of cataract patients undergoing cataract surgery with intraocular lens implantation in sutthavej hospital". Who found that there was a positive correlation with self-care behaviors and their total level of knowledge. Also, **Nassar et al., (2024)** reported that there was positive correlation between total level of knowledge satisfaction score and total level of self-care practice score among studied groups. From investigator point of view this may be due to the information assessed by the researcher primarily addressed the nature of the disease, its causes, and potential complications, but not directly related to self-care practices after cataract surgery . Consequently, the findings revealed no statistically significant relationship between patients' knowledge and their adherence to self-care practices after cataract surgery.

Conclusion

Based on the findings of the present study, it can be concluded that:

The present study revealed that more than one third of the studied patients had satisfactory total level of knowledge regarding self-care after cataract surgery, while, almost two thirds of them had unsatisfactory total level of knowledge regarding self-care after cataract surgery ,as well majority of them had high self-compliance on the first, second and fourth post-surgery day. also, there was no statistically significant correlation between total level of knowledge of the studied patients and their total level of practices on the first, second and fourth post-surgery day.

Recommendation

Based on the findings of the study results, the following recommendations were suggested:

Recommendations related to patients:

- Health education program should be designated for the patients undergoing cataract surgery and their families about the disease, postoperative care and prevention of cataract surgery complications
- A simplified illustrated and comprehensive arabic booklet including postoperative self-care practices guidelines should be provided for patients undergoing cataract surgery.

Recommendations for further researches:

- Replication of the current study with a bigger statistical sample size selected from different regions and a longer follow-up period in order to get more broadly applicable findings.
- Further researches are proposed to evaluate the effect of the implementation of guidelines on decreasing the incidence of complications after cataract surgery.

**Recommendations for education:**

- Studying patient's self-care practices after cataract surgery more broadly in the nursing specialty.
- Academics should offer clear, detailed information to students about self-care practices after cataract surgery. This can be done through lectures, workshops, or written materials that explain eye care, medication adherence, and activities to avoid post-surgery.
- Motivate students to conduct research or study real-life patient cases who have undergone cataract surgery. This helps them understand the effect of self-care practices on recovery and how to improve patient outcomes.

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