

## **Effect of Patient Centered Care on Self-care practices and Satisfaction among Patients with Cataract Surgery**

**Naglaa Fathy Gouda Nassar<sup>1</sup>, Amal Elsayed Shehata<sup>2</sup>,  
Abeer El-Said Hassan<sup>3</sup>**

*<sup>1</sup>Master degree in Nursing Science, <sup>2,3</sup>professor of Medical Surgical Nursing,  
Faculty of Nursing, Menoufia University*

**Abstract:** Cataract remains one of the leading causes of blindness in Egypt and South Africa. Self-care practice is a vital element of daily living and overall well-being of cataract patients. **Purpose:** To examine effect of patient centered on self-care practices and satisfaction among patients with cataract surgery. **Methods:** Design: Quasi experimental research design was used. Sample: A consecutive sample of 100 adult patients with cataract was selected for the current study. **Instruments:** Structured questionnaires assessing patient Socio-demographic data and medical data, observational checklist to assess self-care practices and patient satisfaction questionnaire to determine the satisfaction among cataract patients after surgery. **Results:** Mean score and standard deviation of baseline patient's practice regarding eye care among studied groups were  $3.34 \pm 6.25$  of study group compared to  $3.68 \pm 7.66$  of control group, While, there were highly statistical significant difference post 1,2 and 3 interventions with P value  $< 0.001$ . Mean scores of patient's satisfaction post intervention were  $39.04 \pm 10.98$  and  $30.60 \pm 10.41$  among study and control groups respectively. **Conclusion:** Patient-centered care is effective method to enhance the clinical outcomes of the patient with cataract. **Recommendation:** Patient centered care should be carried out for cataract patients in ophthalmology setting to increase their knowledge about disease and meet their needs with decrease incidence of complication as vision loss.

**Key words:** *Cataract, Self-Care Practice and Satisfaction*

### **Introduction**

Cataracts are one of the serious eye problems, the second leading cause of visual impairment and the first cause of blindness globally. Cataract is a disease of the eye in which the normally clear lens has opacified which obscures the passage of light. It

is a gradually progressive disease and a significant cause of blindness around the world. A cataract is a clouding of the natural intraocular crystalline lens that focuses the light entering the eye onto the retina. This cloudiness can cause a decrease in vision and may

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

lead to eventual blindness if left untreated (Sarkar et al., 2023).

Globally, at least 2.2 billion people have a near or distance vision impairment. In Egypt, the prevalence of low vision for all ages is 47.9% of the population with cataract the major cause of blindness 54.8%. It has been approximately 1 million people blind and 3 million visually impaired. Nearly 60% of the visually impaired in Egypt have cataract. About 2000 cases are annually subjected for cataract related surgery at ophthalmology department in Shebin El Kom Menoufia University Hospital (World Health Organization, (2023) & A statistical record of Menoufia University Hospital of Ophthalmology, (2022).

There are different types of cataract. Nuclear cataracts form in the middle or center of the lens and cause the nucleus to become yellow or brown. Cortical cataracts are wedge-shaped and form around the edges of the nucleus. Posterior capsular cataracts form faster than the other two types and affect the back of the lens. Congenital cataracts, which are present at birth or form during a baby's first year. Secondary cataracts are caused by disease or medications such as glaucoma, diabetes and steroid medication (National Eye Institute, 2023).

Common symptoms of cataracts include blurry vision, trouble seeing at night, seeing colors as faded, increased sensitivity to glare of the sun or other bright lights, driving becomes more difficult, particularly at night, halos surrounding lights, double vision in the affected eye and a need for frequent changes in prescription glasses. Vision

loss due to cataracts is usually very gradual as cataract cause vision to worsen, making it especially difficult to see fine details clearly (National Eye Institution, 2023).

Treatment of cataracts, using eye drop or other treatments that claim don't remove cataract. If symptoms are not affecting the performing activities of daily living, just need stronger eyeglasses prescription, magnifying lenses, or sunglasses with an anti-glare coating (American Optometric Association, 2023).

Surgery is the only way to cure from cataract. The cataract surgery is one of the safest and successful surgical procedures performed today; surgery is recommended when cataracts are a barrier of daily living activities such as reading or driving. It is also performed when cataracts interfere with the treatment of other eye problems (Royal National Institute of Blind people, 2022).

Patient centered care is the practice of routinely attending to one's unique physiological and emotional requirements. Examples of this include adjusting one's daily schedule, interpersonal interactions, and environment as necessary to support self-care. Improper nursing intervention was viewed as impaired ability to perform or complete self-care practices, bathing, dressing/grooming, toilet care, care related to feeding, hair care, and nail care. Guidelines of patient centered care were designed to enhance self-care ability and included scheduling daily activities (Ahmed et al., 2021).

## *Effect of Patient Centered Care on Self-care practices and Satisfaction among Patients with Cataract Surgery*

Effective patient centered care is important to improve patient's knowledge, self-care practice and help increase patients' ability to deal with daily consequences of their disease to maintain quality of life. The nurses should assess the patient's basic needs and assist to meet these needs. Nursing intervention has proven beneficial in increasing knowledge of cataract and self-care practices as well as positively influencing patient's satisfaction. Therefore effective nurse-led training or intervention and counseling are essential for the self-management of cataract among cataract patients (Kio et al., 2020).

Patient's satisfaction after cataract surgery is influenced by factors such as occupation, literacy, exposure to information on newer interventions for cataract, experience of cataract operations among relatives and friends, preoperative counseling, timing of surgery, and skill of the surgeon (Shakeel et al., 2019).

### **Significance of the study**

Cataract is the most common cause of visual impairment around the world. It can significantly reduce patients' quality of life and one of the main ophthalmological public health problems in the developed and developing countries and it is known as the main cause of blindness in many countries (Hashemi et al., 2020).

Nursing intervention is very important in preparing patients to take responsibility for operating instructions. The efficient process of information transfer is very important in the preparation of outpatient cataract

surgery. Providing sufficient time for the education process is very important, because the preoperative expectations of cataract patients have an important role in postoperative satisfaction. Effective nursing intervention before cataract surgery may reduce anxiety, speed up return, and increase patient satisfaction, and reduce complications of surgery (Ahmed et al., 2021). There for the purpose of the present study was to examine the relationship between self-care practice and satisfaction among patients with cataract surgery.

### **Purpose of the Study**

The purpose of the current study: - To examine the effect of patient centered care on self-care practice and satisfaction among patients with cataract surgery.

### **Research Hypotheses:**

- Patients who received patient centered care (study group) exhibited improvement in self-care practices score than patients who didn't receive nursing intervention (control group).
- Patients who received patient centered care (study group) exhibited more satisfactory score than patients who didn't receive nursing intervention (control group).

### **Methods:**

#### **Design: -**

Quasi experimental research design was used.

***Effect of Patient Centered Care on Self-care practices and Satisfaction among Patients with Cataract Surgery***

**Sampling: -**

A consecutive sample of 100 adult patients undergoing cataract surgery.

**Inclusion criteria: -**

- Patients aged <65years old in both sex.
- Alert and can communicate.

**Exclusion criteria: -**

- Mental and cognitive impairment such as delirium and dementia because they may interfere with the patient's care and cannot communicate.
- Patient who previously attended training sessions related to cataract or with history of previous cataract surgery.

**Instruments of the study:**

Three instruments were used.

**Instrument one:      **Structured****

**Interview Questionnaire**

This instrument was developed by the researcher; it covered the following parts:

- Part one: Patient Socio-demographic data: - It was used to assess patient's characteristics such as age, sex, level of education, occupation and marital status.... etc.
- Part two: Medical data: - It included information about past and present medical history such as duration of illness, taken medication, family history and previous surgery....etc.

**Instrument two:      **Observation checklist****

It was adopted from Taha (2021) to assess patient's practices regarding eye care. The checklist includes: eye drop instillation (handling and administration), eye ointment application, eye care and infection control, practice of measures for relieving postoperative pain, using non-pharmacological methods to reduce pain such as relaxation massage, tense and relax exercise and deep breathing exercise.

**Scoring system: -**

Each patient was observed, evaluated and the observation checklist was filled by the researcher

Practice	Score
Done Correctly	2
Done Incorrectly	1
Not Done	0

**Instrument three:      **Patient's satisfaction questionnaire****

It was adopted from Shakeel et al., (2019) to determine the patients' satisfaction after surgery by using visual function questionnaire.

**Scoring system: -**

Total level of satisfaction is categorized as high satisfaction 75% and more, moderate satisfaction from

## *Effect of Patient Centered Care on Self-care practices and Satisfaction among Patients with Cataract Surgery*

50 % to less than 75% and low satisfaction less than 50%,

- High satisfaction (>75%)  
39-50
- Moderate satisfaction (50-75%)  
25-38
- Low satisfaction (<50%)  
0-24

### **Validity and Reliability**

All instruments were tested for its content validity by 5 experts in the field of medical surgical nursing, ophthalmology specialist and modifications carried out accordingly. In order to determine the dependability of the created instruments, test retest method and a person correlation coefficient formula to ascertain reliability of instruments. Internal consistency was evaluated using Cronbach alpha for all instruments. It was 0.85 for instruments one and two structured interview questionnaire. Observational checklist for patients' satisfaction was 0.81 alpha for instrument three.

### **A pilot study**

A pilot study was carried out prior to data collection on 10% of the sample size (10 patients) to assess the constructed instruments for feasibility and applicability and the necessary modifications were carried out accordingly. The samples used were excluded from the actual study.

### **Ethical consideration**

All participants who meet the inclusion criteria were informed about purpose, procedure, and benefits of the study then a written consent was obtained

from all participants. Participation in the study was voluntary and the patients withdraw from the study at any time without penalty. Confidentiality and anonymity of patients was assured through coding all data and putting all papers in a closed cabinet. Participants were informed that the nature of instruments would not cause any physical or emotional harm to participants.

### **Procedure**

Data was collected over a period of 3 months extended from the beginning of June 2022 to the end of August 2022. Patients who agreed to participate in the study and fulfilled the inclusion and exclusion criteria were assigned randomly and were divided alternatively into two equal groups; control group (I) and study group (II) for collecting data. The researcher dealt with the control group (I) firstly then the study group (II) to avoid the contamination of results. The purpose of the study was explained to each participant of both study and control group.

#### **▪ Assessment phases:**

Each participant of both groups was interviewed individually and assessed for socio-demographic data and medical data by using part one and two from instrument one. All subjects of both groups were assessed for self-care practices such as eye drop instillation (handling, storage and administration), eye ointment application, and eye exercises and eye compresses by using instrument two. All participants of both groups were assessed for satisfaction from care by using instrument three.

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

▪ **Planning phase:**

Based on the gathered information and knowledge level of participants, a colored booklet supported with illustrative pictures and simple videos were prepared that included information about basic information about related to eye, physiology of eyes, in addition to cataract disease such as (definition, incidence, causes, risk factors, types, signs, symptoms, diagnostic evaluation, complication, management and prevention of cataract) was given for each participants of group II.

Nursing intervention: focused on self-care practices such as eye drop instillation (handling, storage, and administration), eye ointment application, eye exercises and eye compresses, moreover a video was prepared to teach subjects in study group about using eye drop instillation (handling, storage and administration), eye ointment application, and eye exercises and eye compresses. It was 2 parts as follow. 1) The first practical part: included checking feedback of received information about cataract and filling gap of missed knowledge that instructed before during theoretical session. 2) The second practical part: included demonstration and return demonstration of practices related to eye care as; instilling eye drops, applying ointment, eye compresses and non-pharmacological methods to reduce tension or pressure such as relaxation massage, tense & relax exercise, deep breathing exercise and the researcher observed their practice using tool II.

▪ **Implementation phase:**

The researcher interviewed each participant in the study group individually at the waiting area at the Ophthalmology Department in Menoufia University Hospital. The researcher conducted at least three teaching sessions or more for each subject according to his/ her level of understanding. Each session was conducted using lecture and discussion and during the final session demonstration and re-demonstration were added. The researcher distributed the prepared booklet for every participant in group II. During the first session: Information about cataract: definition, types, risk factors, diagnosis and treatment. It took about 30-45 minutes according to patients' level of understanding. At the end of the session the researcher allowed subjects to ask questions and provided them with the answers.

The second teaching session, at the beginning of second session, the researcher reinforced the received information, the researcher taught the participants of the study group (II) how to use eye drop instillation (handling, storage, and administration), eye ointment application, and eye exercises and eye compresses and solve any problems that might arise during practicing of self-care. At the end of the session the researcher allowed subjects to ask questions and provided them with the answers. It took about 45 -60 minutes according to subjects' level of understanding. During the third session: In this session the researcher refreshed and reinforced the previous information. The researcher taught

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

subjects how to perform self-care practices then subjects re-demonstrated the learned skills. It took about 30-45 minutes.

▪ **Evaluation phase:**

The studied groups was evaluated at four time intervals (before operation, before discharge, one week and two week after operation) to highlight the effect of intervention. During follow up period, the researcher reinforced the subjects of the study group II by phone.

**Statistical analysis**

Collected data were described using Mean and Standard Deviation (SD) for numerical data and frequency and percentage for categorical data. Pearson Chi-square test ( $\chi^2$ ) & Fisher's Exact Test, and Student t retest were used to compare changes in studied parameters throughout the study phases, as appropriate. The Spearman correlation, Kruskal-Wallis test (non-parametric test) were used to assess the correlation between studied variables. Statistical significance was considered at  $P < 0.05$ . The data collected were tabulated & analyzed by SPSS (statistical package for the social science software) statistical package version 20 on IBM compatible computer (SPSS, Chicago, IL, USA).

**Results:**

**Table (1):** This table shows that the mean age of study and control group was ( $57.30 \pm 5.11$  and  $58.16 \pm 4.97$  respectively). About two thirds of control group (64.0%) was males while the study group was equal (50% male

and 50% female). Concerning marital status, both study group and control group were married. Regarding level of education, about 44% of study group graduated from university school while about two third of control group (66.0%) graduated from the university. Regarding to occupation, half of study group (50% & 70 %) had administrative work in study and control group respectively. As regard residence, both groups were from rural areas. As regard monthly income, majority of both groups (90.0% - 94.0% respectively) have enough income and two third of study group were smokers while half of control were smokers. There were no statistical significant differences between both groups regarding all sociodemographic characteristics with  $P$  value  $> 0.05$ .

**Table (2):** This table reveals that both the studied groups have cataract in the past medical history. About two third of study group (60.0%) have diabetes mellitus in past medical history while all the control group have diabetes mellitus in past medical history. Regarding past surgical history, majority of study group (60%) have previous cataract surgeries while no one in control group have previous surgeries. Regarding to family history, majority of both groups have cataract (80% & 100%) and refractive error (80% & 100%) respectively in addition to both groups have family history of diabetes mellitus and hypertension. Regarding source of information related to cataract both groups know information from doctor while two third of study group know information from relative and friend, while

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

minority of study group (20%) know from magazine and media. No one of both group attending any training sessions related to cataract.

**Table (3):** Illustrates Comparison of baseline patient's practice regarding eye care among studied groups. This table reveals that mean score of baseline patient's practice regarding eye drop instillation  $1.48 \pm 3.77$  and  $1.0 \pm 2.15$  among study and control group respectively, Regarding eye ointment application mean score at baseline patient's practice were  $0.86 \pm 2.62$  and  $1.36 \pm 3.40$  among study and control group respectively, Regarding eye care mean score at baseline patient's practice were  $1.0 \pm 2.22$  and  $1.32 \pm 2.46$  among study and control group respectively with no statistical significant difference between them, Regarding non pharmacological methods mean score at baseline patient's practice were equal among both groups. Finally total mean score of mean and standard deviation of baseline patient's practice regarding eye care among studied groups were  $3.34 \pm 6.25$  of study group compared to  $3.68 \pm 7.66$  of control group.

**Table (4):** Illustrates Comparison of patient's total score of self-care practices regarding eye care among studied groups (pre - post intervention). This table shows that there were no statistical significant differences between study group and control group pre intervention. While, there were highly statistical significant difference between them post (1,2 &3) intervention with p value  $<0.001$ .

**Figure (1):** Patient's total score of self-care practices among the studied

groups (pre and post-intervention). This figure reveals that patient's total score of self-care practices regarding eye care pre intervention were 3.34 and 3.68 for study and control groups respectively. While scores of patient's practices regarding eye care post 1 intervention were 113.96 for study group compared to 3.68 for control group, While post 2 intervention were 116.12 for study group compared to 3.68 for control group and post 3 intervention were 109.84 for study group compared to 3.68 for control group.

**Table (5):** Illustrates comparison of patient's satisfaction among the studied groups (post-intervention). This table shows that there were highly statistical significant difference of patient's satisfaction among the studied groups (post-intervention) with p value  $<0.001$ . Mean score of patient's satisfaction post intervention  $39.04 \pm 10.98$  and  $30.60 \pm 10.41$  among study and control group respectively. Majority of study group (70%) have high satisfaction score post intervention compared to (26%) of control group .And (6%) have low satisfaction compared to (30%) of control group.

**Figure (2):** Patient's satisfaction categories among the studied groups (post-intervention). This figure reveals that the study group have higher satisfaction score 70 compared to control group have score 26 post intervention.

**Figure (3):** Correlation between total satisfaction score and patient's self-care practices score among study group and control group. This figure reveals



**Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery**

that there was positive correlation between total satisfaction score and

total self-care practice score among studied groups.

**Table (1): Distribution of the studied groups regarding socio-demographic characteristics:**

Demographic characteristics	Studied groups				$\chi^2$	P value
	Study group (n=50)		Control group (n=50)			
	NO.	%	NO.	%		
<b>Age (years):</b> Mean±SD Range	57.30 ± 5.11 49.0 – 65.0		58.16± 4.97 49.0– 65.0		t- test = 0.85	0.39 NS
<b>Gender:</b> Male Female	25 25	50.0 50.0	32 18	64.0 36.0	1.99	0.15 NS
<b>Residence:</b> Rural	50	100.0	50	100.0	NA	NA
Marital status: Married	50	100.0	50	100.0	NA	NA
<b>Occupation:</b> Manual work Administrative work Housewife	5 25 20	10.0 50.0 40.0	2 35 13	4.0 70.0 26.0	4.43	0.10 NS
<b>Education level:</b> Illiterate Read & write Secondary University	8 6 14 22	16.0 12.0 28.0 44.0	2 6 9 33	4.0 12.0 18.0 66.0	6.88	0.07 NS
<b>Smoking:</b> Yes No	18 32	36.0 64.0	25 25	50.0 50.0	1.99	0.15 NS
<b>If yes, type of smoking:</b> Cigarette	18	100.0	25	100.0	NA	NA
<b>If participant smokes cigarettes, how many packages /day?</b> Package or less 2-3 package	15 3	83.3 16.7	20 5	80.0 20.0	0.07	1.0* NS
<b>Monthly income:</b> Enough Not enough	45 5	90.0 10.0	47 3	94.0 6.0	0.54	0.71* NS

$\chi^2$  = Pearson Chi-Square test

t= student t- test

NS: not significant (P value > 0.05)

\*Fisher`s Exact test

NA: not applicable

**Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery**

**Table (2): Distribution of the studied groups regarding patient medical data:**

Patient medical data	Studied groups				$\chi^2$	P value
	Study group (n=50)		Control group (n=50)			
	NO.	%	NO.	%		
<b>a) Past medical history</b>						
<b>Cataract:</b> Yes	50	100.0	50	100.0	NA	NA
<b>Glaucoma:</b> No	50	100.0	50	100.0	NA	NA
<b>Refractive error:</b> Yes No	10 40	20.0 80.0	50 0	100.0 0.0	66.66	<0.001 HS
<b>Diabetes Mellitus:</b> Yes No	30 20	60.0 40.0	50 0	100.0 0.0	25.0	<0.001 HS
<b>Hypertension:</b> No	50	100.0	50	100.0	NA	NA
<b>b) Past surgical history</b>						
<b>Cataract:</b> Yes No	30 20	60.0 40.0	0 50	0.0 100.0	42.85	<0.001 HS
<b>Glaucoma:</b> No	50	100.0	50	100.0	NA	NA
<b>Refractive error:</b> No	50	100.0	50	100.0	NA	NA
<b>c) Family history</b>						
<b>Cataract:</b> Yes No	40 10	80.0 20.0	50 0	100.0 0.0	11.11	0.001 HS
<b>Refractive error:</b> Yes No	40 10	80.0 20.0	50 0	100.0 0.0	11.11	0.001 HS
<b>Diabetes Mellitus:</b> Yes	50	100.0	50	100.0	NA	NA
<b>Hypertension:</b> Yes	50	100.0	50	100.0	NA	NA
<b>d) Source of information related to cataract</b>						
Doctor, Ophthalmologist.	50		50		11.11	0.003 S
Family member, relative, friend suffering from it.	40		50			
TV, magazines, or other media.	10		0			
Attending any training sessions related to cataract or cataract surgery? Yes No	0 50	0 100.0	0 50	0 100.0	NA	NA

$\chi^2$  = Pearson Chi-Square test

HS: Highly significant (P value < 0.001)

S= Significant

**Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery**

**Table (3): Comparison of patient's self-care practices regarding eye care among the studied groups (pre-intervention):**

Baseline patient's practices regarding eye care	Studied groups		Mann-whitney test.	P value
	Study group (n=50)	Control group (n=50)		
	Mean±SD Range	Mean±SD Range		
Eye Drop Instillation (Handling, Storage & Administration)	1.48±3.77 0.0 – 15.0	1.0±2.15 0.0 – 8.0	U= 0.08	0.92 NS
Eye Ointment Application	0.86±2.62 0.0 – 10.0	1.36±3.40 0.0 – 12.0	U= 1.36	0.17 NS
Eye Care	1.0±2.22 0.0 – 8.0	1.32±2.46 0.0 – 8.0	U= 0.88	0.37 NS
Non pharmacological methods as relaxation massage, Tense & relax exercises for eye & deep breathing exercise	00.0±0.0 0.0 – 0.0	00.0±0.0 0.0 – 0.0	NA	NA
<b>Total score</b>	3.34±6.25 0.0 – 27.0	3.68±7.66 0.0 – 27.0	U= 0.77	0.44 NS

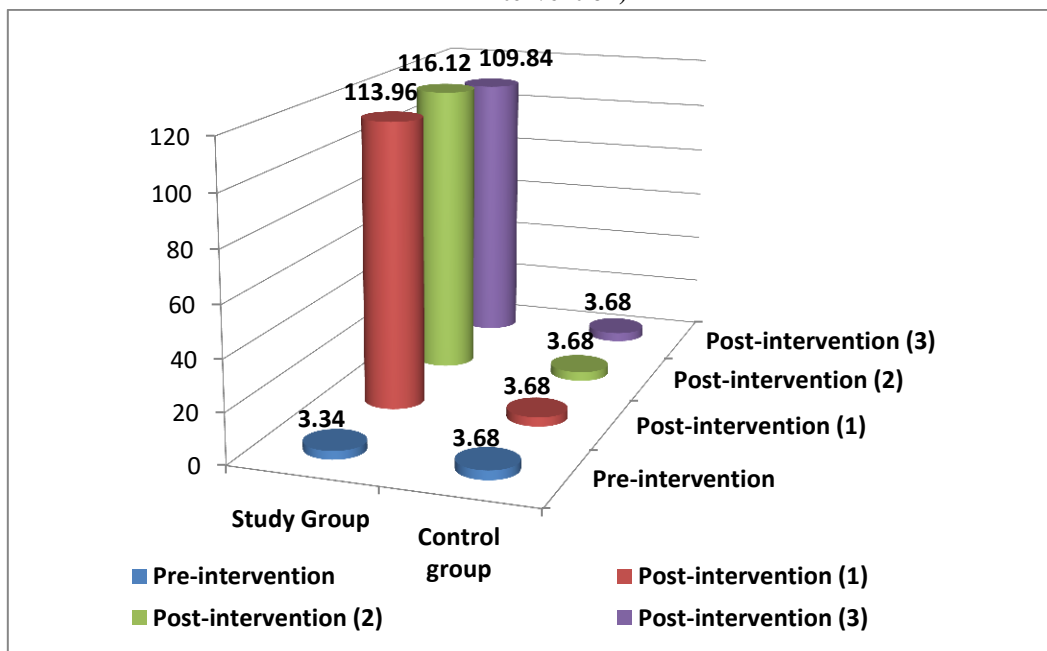
**Table (4): Comparison of patient's total score of self-care practices among the studied groups (pre and post-intervention):**

Total score of patient's self-care practices	Studied groups		Mann-whitney test.	P value
	Study group (n=50)	Control group (n=50)		
	Mean±SD Range	Mean±SD Range		
Pre-intervention	3.34±6.25 0.0 – 27.0	3.68±7.66 0.0 – 27.0	U= 0.77	0.44 NS
Post 1- intervention	113.96±35.13 0.0 – 134.0	3.68±7.66 0.0 – 27.0	U= 8.21	<0.001 HS
Post 2- intervention	116.12±35.78 0.0 – 134.0	3.68±7.66 0.0 – 27.0	U= 8.26	<0.001 HS
Post 3- intervention	109.84±35.53 0.0 – 134.0	3.68±7.66 0.0 – 27.0	U= 8.21	<0.001 HS
Repeated measured ANOVA	440.74	NA		
P value	<0.001 HS	NA		
Post-hoc test	P1= <0.001 HS P2= <0.001 HS P3= <0.001 HS P4= <0.001 HS P5= 0.01 S P6= <0.001 HS	NA		

- P1: Comparison pre-intervention vs. Post- intervention (1)  
P2: Comparison pre-intervention vs. Post- intervention (2)  
P3: Comparison pre-intervention vs. Post- intervention (3)  
P4: Comparison Post- intervention (1) vs. Post- intervention (2)  
P5: Comparison Post- intervention (1) vs. Post- intervention (3)  
P6: Comparison Post- intervention (2) vs. Post- intervention (3)

**Effect of Patient Centered Care on Self-care practices and Satisfaction among Patients with Cataract Surgery**

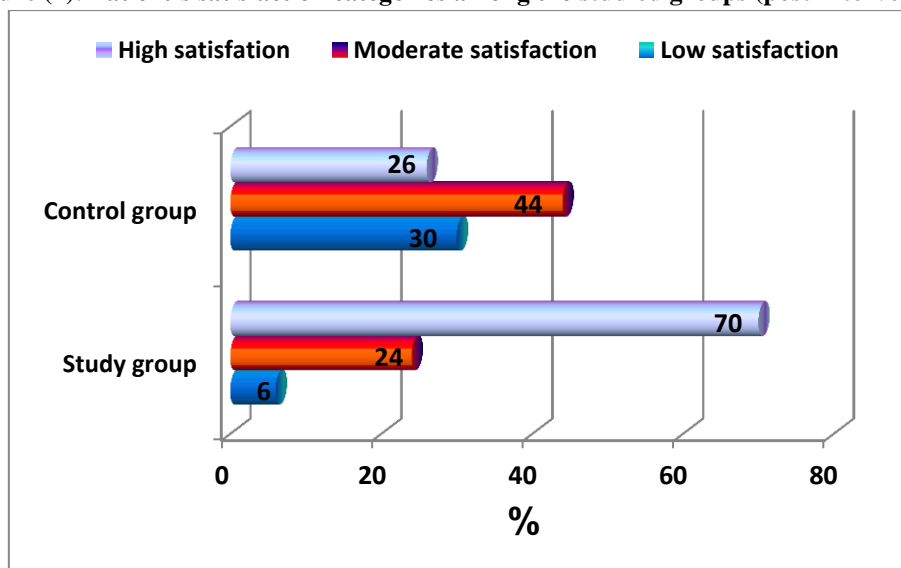
**Figure (1): Patient’s total score of self-care practices among the studied groups (pre and post-intervention)**



**Table (5): Comparison of patient’s satisfaction among the studied groups (post-intervention):**

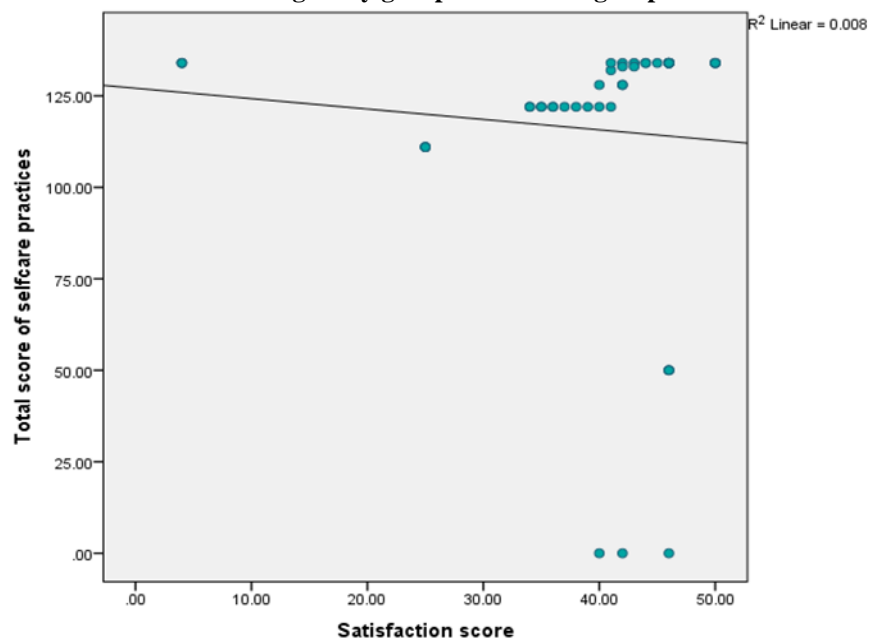
	Studied groups		$\chi^2$	P value
	Study group (n=50)	Control group (n=50)		
<b>Total score of satisfaction</b>				
Mean±SD	39.04±10.98	30.60±10.41	t=	<0.001
Range	4.0 –50.0	12.0 –46.0	3.94	HS
<b>Satisfaction categories:</b>				
High satisfaction	35 (70.0)	13 (26.0)	21.02	<0.001 HS
Moderate satisfaction	12 (24.0)	22 (44.0)		
Low satisfaction	3 (6.0)	15 (30.0)		

**Figure (2): Patient’s satisfaction categories among the studied groups (post-intervention).**



*Effect of Patient Centered Care on Self-care practices and Satisfaction among Patients with Cataract Surgery*

Figure (3): Correlation between total satisfaction score and patient's self-care practices score among study group and control group.



## Discussion

Sociodemographic characteristics of the studied sample: Regarding to age, the present study showed that, the age of the studied groups were ranged between (49-65 years old) and the mean age of the study group was  $57.30 \pm 5.11$  and control group was  $58.16 \pm 4.97$ . This finding was consistent with the study done Ahn et al., (2019) who stated that the mean age of studied groups was  $62.6 \pm 10.7$  years. Also this finding was in line with Chawla & Benbadis, (2022) who reported that the age of most of the studied sample was ranged between ranged between 23-65 years old. On the other hand the current study finding was disagree with Chen et al., (2018) who reported that the majority of patients with respect to their age were less than 25 years old and also disagreed with El-Mowafi, (2019) who showed that around one

half of patients were aged between 20 to 30 years old.

Regarding to sex, the present study revealed that, approximately two third of control group (64.0%) was males while the study group was equal (50% male and 50% female) this agreed with Abdelazeem, (2021) who reported that more than half of control group were males. Moreover Jullia & Kelly, (2019) who reported that two thirds of control group were males and that was harmonized with Mansour et al., (2019) who found that the majority of control group were males. Also El-Mowafi, (2019) who showed that most control subjects were males while about half of study group were female. Regarding to marital status, the present study revealed that all the study subjects were married. This finding was matched with their age group and was supported by Taha & Abd Elaziz,

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

(2018) who reported that the majority of their studied subjects were married. This finding is contradicted with El-Mowafi, (2019) who showed that most of subjects were single. This contraindication may be related to the difference of age group between both studies.

Regarding to educational level, the present study found more than one third 44% of study group graduated from university while about two third of control group (66.0%) graduated from the university, the current study finding was in line with Guerrier et al., (2021) who found that around half of the study group was holding bachelor degree. Also agreed with Oh et al., (2019) who showed that more than one third of study group graduated from the university. On the other hand the results in contrast with Lee et al. (2018 ) & El-Mowafi, (2019) they reported that more than three quarters of the studied patients had higher education and around one half of the sample had diploma while only 10% were bachelor degree.

Regarding to occupation, the present study showed that half of study group and more than two thirds of control group had administrative work. This result supported by Guerrier et al, (2021) who concluded that the rate of jopness is high among cataract patients. The present study revealed that the most common chronic disease among studied subjects of both groups was diabetes mellitus. This finding is consistent with Ho et al, (2019) who mentioned that DM was highest among cataract patients and about half of both groups of the study complain of

chronic diseases. Regarding family history, the current study found that majority of both groups have cataract, refractive error, diabetes mellitus and hypertension. On the same line; Dunaief, (2020) revealed that, majority of both groups had past family history of eye diseases.

Also; this result consistent with the reports of a high prevalence of a positive family history of eye disease among individuals with cataract National eye Institution, (2023). And the finding of Ho et al., (2019) they revealed that family history of DM was highest among cataract and about half of both groups of the study complain of chronic diseases. From researchers' point of view this discrepancy may be due to different setting and availability of resources to diagnose cases of cataract.

The first hypothesis was accepted according to the present study which revealed that post-intervention, most of patients have improved self-care practices by one and two weeks compared with pre intervention with high statistically significant differences. This result was agreed with Taha, (2021) who also demonstrated that there was significant increaseing in level of self-care score after nursing intervention among the study group. Moreover, this was in the same line with Yotsukura et al., (2020) they stated that, there were statistically significant improvement in the knowledge, self-care practices and expectation of care post intervention compared with patient's performance baseline.

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

Regarding to practice, the current study finding revealed that there was a major improvement in total mean patients practice score related to instilling eye drops, applying ointment, eye care and non-pharmacological methods for pain control, there was a very highly statistically significant difference in patients practice pre- intervention, post- intervention and follow up. The majority of studied groups had an unsatisfactory level of practice pre-intervention but post-intervention had a satisfactory level of practice.

This result was agreed with (Jullia & Kelly, 2019 & Obuchowska & Konopinska, 2021) they demonstrated a major deficiency in patient's practice before implementation of the nursing intervention. It was a striking finding that none of them could adequately practice of eye ointment application, eye dressing using infection control, and non-pharmacologic pain relief.

Regarding to non-pharmacological methods; eye exercises are a vital step for increasing eye relaxation, meditation and stress reduction. In the current study pre-intervention, none of the patients were performing eye exercises and highly statistically significant difference among study group than control group post intervention. This finding is consistent with the result of Jiali et al., (2019) they found that only one third of subjects practiced exercise. Also; Skalicky et al., (2018) they argued that natural methods of eye care improve adequate blood supply to the optic nerve, improve the collagen structure of the eyes and drainage of aqueous

humor thus leading to normalization of intraocular eye pressure.

Also the second hypothesis was accepted as the current study stated that total mean scores of patient satisfaction were significantly improved post intervention. This finding agreed with Yotsukura et al., (2020) who reported that meeting patients' needs lead to better outcomes and improve patient's satisfaction. Moreover Kinga & Ursula, (2022) reported meeting patient expectation induce improvements in patients related practice, better achievement of needs, enhance the quality of care, convenience of care and improve health outcomes. Also agreed with (Ezenwa and Nwosu, 2020; Chawla and Benbadis, 2022 & Yotsukura, et al., 2020) who reported that meeting patients' needs and expectation induce better outcomes as improve patient's satisfaction and quality of sleep.

Regarding correlation between total satisfaction score and patient's self-care practices score among study group and control group. This study reveals that there was positive correlation between total satisfaction score and total self-care practice score among studied groups. This finding agreed with Xu et al., (2022) who reported that, there was statistically significance difference between patient's self-care practice and satisfaction score pre intervention. From the researcher point of view, it can be concluded that effective patient centered care improves patient's self-care practices and satisfaction about cataract with a sustained improvement in patient's clinical outcomes.

***Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery***

**Conclusion: -**

Based on the findings of the present study, it can be concluded that: There was an improvement in patients' self-care practice and satisfaction among cataract surgery patients after the intervention. Patient centered care is effective methods to enhance the clinical outcomes of the patient with cataract, increase knowledge, improve self - care practice and satisfaction.

**Recommendations:**

An educational nursing interventions should be developed for patients about cataract and the importance of proper self-care practice for cataract patients to improve their knowledge. Simple booklets should be developed including the most important instructional points regarding cataract. Replication of the study on a large sample size at other setting is required.

**References**

- A statistical record of menoufia University Hospital of Ophthalmology, (2022).
- Abdel Azeem, A .( 2021). Educational Nursing Intervention: Its Effect on the Nurses' Performance, Patients' Daily Living Activities, Needs and Selected Visual Problems of Cataract Surgery. *Egyptian Journal of Health Care( EJHC)*; 12(2) 280-296.
- Ahmed, W., Omar, A.& Abd El Aziz, N. (2021). Effect of Multidiciplinary educational course on health literacy and satisfaction of patients undergoing cataract surgery. *Egyptian Journal of Health Care*; 12(4):216-7.
- Ahn, I., Lee, S., Han, Y., Park, C., Kim, B., Lee, C., Cha, B., Seo, J., Choi, J & Lee, D, (2019). Effects of Emotional Stability on Insomnia through Anxiety in Patients with Cataracts. *Psychiatry Investig Journal*;16(1):93-96.
- American Optometric Association, (2023). Cataract. Available at (<https://www.aoa.org/patients-and-public/eye-and-vision-problems/glossary-of-eye-and-vision-conditions/cataract>).
- Chawla, J & Benbadis, S., R. (2022). Insomnia Treatment & Management. Available at: <https://emedicine.medscape.com/article/1187829-treatment>.
- Chen, Y., Nondahl, D, M., Carla R. Schubert, C, R., Barbara, E,K., Klein, R. & Cruickshanks, K, J. (2018). The relation between sleep disruption and cataract in a large population study. *Ophthalmic Epidemiol*; 24(2): 111–115.
- El-Mowafi, H (2019). "Effect of Training Program on Performance of Nurses Caring for Patient with Negative Pressure Wound Therapy" .*IOSR Journal of Nursing and Health Science (IOSRJNHS)*, vol. 8, no.01, pp. 31-35. Retrieved on: 23 December, (2019).
- Ezenwa, A & Nwosu, S. (2020). "Satisfaction with Eye care among Cataract and Glaucoma Patients in Onitsha Nigeria".



*Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery*

- Acta Scientific Ophthalmology; 3(6): 27-31.
- Guerrier, G., Bernabei, F., Lehmann, M., Pellegrini, M., Giannaccare, G. & Rothschild, P., (2021) Efficacy of Preoperative Music Intervention on Pain and Anxiety in Patients Undergoing Cataract Surgery. *Front. Pharmacol.* 12:748296. doi: 10.3389/fphar.2021.748296.
- Hashemi, H., Pakzad, R., Yekta, A., Aghamirsalim, M., Pakbin, M., Ramin, S. and Khabazkhoob, M. (2020). Global and regional prevalence of age-related cataract: a comprehensive systematic review and meta-analysis. *Royal College of Ophthalmologists*; 34(8): 13571370.
- Jiali, L., Wenmin, H., Jinyun, G., Dandan, L., Liya, X. & Jingjing, H. (2019). Awareness, Knowledge and perception of glaucoma. *Clinical ophthalmology Journal*; 25(6):455-461.
- Jullia, A. & Kelly, W. (2019). *Clinical Ophthalmology* available at <https://www.dovepress.com>.
- Jullia, A. & Kelly, W. (2019). *Clinical Ophthalmology* available at <https://www.dovepress.com>.
- Kinga, K., & Ursula, H. K. (2022). Survey of patient satisfaction after bilateral cataract surgery. *Romanian journal of ophthalmology*; 66(1): 36–40. <https://doi.org/10.22336/rjo.2022.9>.
- Kio, J., Bankole, M. & Ayodele, K., (2020). Nurse led intervention on the self-management of cataract among patients at federal medical center. *Int J Res Med Sci*: 8(7); 2568-74.
- Lee, J., Bailey, G., & Thompson, V., (2018). Cataract diagnosis and management Available at: <https://www.aao.org/eye-health/diseases/cataract-treatment>.
- Mansour ,M., Abd-Elaziz, N., Mekkawy, M. & Ahmed, R., (2019) .Awareness among cataract patient at upper Egypt . *International Journal of Advanced Nursing Studies* ;44(4):436-441.
- National Eye Institute, (2023): Facts about Cataract, Available at: [http:// nei. nih. gov /health /cataract /cataract facts](http://nei.nih.gov/health/cataract/cataract-facts).
- Obuchowska, I & Konopinska, J, (2021). Fear and Anxiety Associated with Cataract Surgery Under Local Anesthesia in Adults. *Psychology Research and Behavior Management*. Dove press journal; 14: 781–793.
- Oh, S., Ra H. & Jee D. (2019). Socioeconomic Status and Glaucoma: Associations in High Levels of Income and Education. *Curr Eye Res. Pup med*; 44(4):436-441.
- Royal national institute of blind people, (2022): Cataract history Available at: <https://www.news-medical.net>.
- Sarkar, D., Sharma, R., Singh, P., Verma, V., Karkhur, S., Verma,

*Effect of Patient Centered Care on Self-care practices and Satisfaction  
among Patients with Cataract Surgery*

- S., Soni, D., & Sharma, B. (2023). Age-related cataract - Prevalence, epidemiological pattern and emerging risk factors in a cross-sectional study from Central India. *Indian journal of ophthalmology*;71(5): 1905–1912.
- Shakeel, S., Kazi, U., Qazi, A, M., Memon, M, S., Memon, F., khan, H. & Tariq, A. (2019). Patient satisfaction after cataract surgery using visual functioning questionnaire. *Int J Res Med Sci*; 7(12):4651-55.
- Skalicky, S., Mellow, G., House, P., & Fenwick, E., (2018). Evaluating the Association between Cataract Education and Patient Knowledge. *Clinical & Experimental Ophthalmology Journal*:10 (46);222-231.
- Taha, A. (2021). Effectiveness of Nursing Intervention Protocol on Nurses' Performance and Patients' Self-Care after Cataract Surgery. *Evidence-Based Nursing Research*, 3(2). <https://doi.org/10.47104/ebnroj.s3.v3i2.190>.
- Taha, N. & AbdElaziz, N. (2018): Effect of nursing intervention guidelines on nurses' role, patients' needs and visual problems post cataract surgery. *American Journal of Nursing Science*, 4 (5): 261-9.
- World Health Organization, (2023). Prevention of Blindness and Visual Impairment: Priority Eye Diseases. Available at: <http://www.who.int/blindness/causes/priority/en/index1.html>.
- Xu, Y., Wen, H., Li, J., Yang, J., Luo, K., & Chang, L. (2022). The Relationship between sleep disorders, anxiety, depression, and cognitive function with restless legs syndrome (RLS) in the elderly. *Sleep and breathing*; 26(3): 1309-1318.
- Yotsukura, E., Ayaki, M & Nezu, N., (2020). Changes in patient subjective happiness and satisfaction with cataract surgery. *Sci Rep* 10, 17273 2045-2322 available at: <https://www.nature.com/articles/s41598-020-72846-2#citeas>.