Quality Of Life for Elderly Patients with Cataract

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Abstract

Background: Cataract is the second cause of visual impairment and the first cause of blindness globally. Poor vision may result in an increased risk of falling and lower quality of life (QOL). **Aim of the study**: The present study aimed to assess the quality of life for elderly patients with cataract. **Design**: A descriptive research design was utilized to conduct this study. **Sample** : A purposive sample was equal 240 elderly patients with diagnosis of cataract. **Setting:** The study was conducted in the Ophthalmology out-patient clinics at Sohag University Hospital. **Tools**: Two tools were used for data collection in the present study, the first tool was an interview questionnaire consisted of three parts to collect the necessary data about elderly subjects include: Part I: Demographic characteristic of the elderly patients with cataract & Past and present medical history of elderly patients with cataract, Part II: The elderly patients knowledge about cataract and Part III: Elderly patients reported practice about cataract. The second tool was Quality of life for elderly patients with cataract. **Result**: The study results revealed that, 80.0% of studied sample had unsatisfactory knowledge about cataract, 60.0% of studied sample had inadequate reported practice about cataract ,and 71.8% of the studied sample had poor quality of life**. Conclusion**: there was highly significant positive correlation between total knowledge scores and total QOL scores regarding cataract among he studied sample. **Recommendations**: The study recommend implementation of educational program for patients about cataract management.

Key words: **Quality Of Life, Elderly Patients, Cataract**

Introduction

Elderly is a complex and dynamic process with interrelated physiologic ,psychologic and sociologic components . It is a normal process that implies continued growth , development and adaption until death . The growth of the elderly population has resulted from a general increase in the overall population size in several of the leading causes of mortality ***(Abd Alla et al.,2019).*** Population ageing is poised to become one of the most significant social transformations of the twenty-first century, globally, the population aged 60 and over is growing faster than all other age groups , by 2050, one in six people in the world will be over age 60 (16%), up from one in 11 in 2019 (9%) **(World population prospects ,2019).** In Egypt, the number of older adults aged 60 years and above reached 6.5million; 3.5million males and 3million females, accounting for 6.7% of the total population according to the Central Agency for Public Mobilization and **Statistics (Abd Alla et al.,2019).**

A cataract is a clouding or a discoloration of the crystalline lens of the eye which leads to a reduce in vision. Cataract is the leading cause of blindness , affecting an estimated 20 million people , because people growth and increased longevity. This is expected to increase to 50 million by the year 2050 if no additional interventions are implemented **(Flayeh,2017).**

Quality of life (QOL) is a multidimensional concept that includes evaluations of both positive and negative aspects of person's life . While health related to quality of life (HRQOL) includes physical and mental health perceptions (health conditions, social and socioeconomic status) and community-level resources, conditions (Practices that influence health perceptions and functional status . QOL includes the following six domains: social well-being, physical well-being, psychological well-being, spiritual well-being, cognitive will-being and environmental will-being **(Trikkalinou et al.,2017).**

The Gerontological nurse is responsible for improving the life style of older adults with cataract through advise them to eat fruits and vegetables rich in vitamin C, E and beta- carotene that can prevent or delay cataract formation. Five to nine daily servings of fruits and vegetables, follow exercise program, avoid smoking, and avoid prolonged exposure to sunlight are recommended for eye health. The Gerontological nurse is responsible for improving quality of life of older adults with cataract through encouraging them to have annual eye examination for early detection of cataract **(Keay et al.,2019).**

Significance of the study

About 20 million people worldwide are blind due to cataracts. It is the cause of approximately 5% of blindness in the United States and nearly 60% of blindness in parts of Africa and South

America . Cataracts become more common with age. In the United States, cataracts occur in 68% of those over the age of 60 years. Additionally they are more common in women **(Berríos et al., 2020).**

Egypt is one of the most populous countries in Africa and the Middle East, the current population of Egypt is 100,821,158, based on World meters elaboration of the latest United Nations data, while the percent of elderly is 5.4%. The prevalence of cataract was 22.9% (higher in women, 26.5% than men 17.2%) , The principal causes of blindness were cataract (60%) While in Egypt, which has approximately 1 million people blind and 3 million visually impaired. Nearly 60% of the visually impaired in Egypt have cataract **(World Population Egypt, 2019).**

Elderly with cataract are less able to earn a living or contribute to the household. These restrictions not only have obvious economic implications, but also they can affect many social and psychological aspects of person's life. Reduced opportunities for interaction and involvement with social networks, for example, could lead to feelings of isolation and lack of social support. There is some indications of a relationship between age-related vision loss and depression in later life. When elderly become visually impaired or blind, their ability to contribute economically, and to social and family life, is greatly reduced. Therefore**(Ye et al., 2020).** Therefore, this study was done to assess quality of life for elderly patients with cataract.

Aim of the study]

The aim of this study was assess the quality of life for elderly patients with cataract. Through the following objectives:-

1- Assessing the elderly patient's knowledge about cataract.
2- Assessing the elderly patient's reported practice about cataract.
3- Assessing quality of life for elderly patients with cataract.

Research question

1- What are the elderly patient's knowledge about cataract?
2- What are the elderly patient's reported practice about cataract?
3- What are the level of quality of life for elderly patients with cataract?

Subject and Methods

The subject and methods for this study portrayed under the four main items as follows:

I- Technical item. II- Operational item.
III- Administrative item. IV- Statistical item.

I- Technical Item

The technical item includes research design, setting, subject and tools for data collection.

Research design

A Descriptive research design was used in this study.

Setting

Conducted at outpatient clinics at Sohag university Hospital which consist of 16 outpatient clinics in different specialist as surgical outpatient clinic, Ear, Nose and Throat outpatient clinic, dermatology outpatient clinic, ophthalmology outpatient clinic, pediatric outpatient clinic, cardiac outpatient clinic, endocrine outpatient clinic, obstetric &gynecological outpatient clinic, psychiatric outpatient clinic, orthopedic outpatient clinic, neurological outpatient clinic, chest outpatient clinic, dental outpatient clinic, urology outpatient clinic, physiotherapy outpatient clinic and medicine outpatient clinic . The study was conducted at ophthalmology outpatient clinic in first floor at Sohag university Hospital Which included one rooms, for checkup, the working in this clinic was all the day per week from 9 am to 2 pm except Friday.

Sampling]

Type of the sample]

A purposive sample of elderly patients diagnosed with cataract.

Sample size: The sample size was calculate by following equation

$$n=N[1+N\ (\ e^2)]$$

n=sample size
N=population size is 600
e=,05 is the level of perception
n=600[1+600 (,0025)] =240
The actual size of sample were 240 elderly patient with cataract through academic year 2020-2021.

Sample criteria

Inclusion criteria

1- Elderly patients age from 60 years and above.
2- Diagnosed with cataract.
3- Willing to participate in the study.

Inclusion criteria

1- Elderly people with mental disorders'
2- Elderly people with hearing impairment

Tools for data collection

Data will collected through using the following tools **:**

1st tool: Structured interviewing questionnaire sheet: was used in the study, it is developed by investigator after reviewing the national and international related literature and contains three parts.

Part I: A) Demographic characteristic of the elderly patients with cataract such as age, sex, marital status, level of education, place of residence and monthly income.

B) Past and present medical history of elderly patients with cataract include: onset of the disease, if suffering from chronic disease and family history of cataract,… etc**.**

Part II: The elderly patients knowledge about cataract include: Meaning, types, sign and symptoms,……etc.

Part III: Elderly patients reported practice about cataract which include : Do you drop eye drops according to the prescribed dose, do you wash your hands before eye drops,……..……etc.

2nd tool: Quality of life assessment questionnaire for elderly patients with cataract. This tool was developed by ***Mohamed (2018),*** which consists of 14 items asking about the adverse effects of visual dysfunction on elderly QOL. These are categorized as follows: **Self-care**: 4 items concerning bathing, eating, dressing and toileting. **Mobilization**: 3 items related to walking to the homes of neighbors, walking to shop, and doing household chores. **Social:** 4 items concerning attending social functions and meeting with friends. **Mental or psychological**: 3 items related to feeling of a burden on others, and loss of confidence.

Scoring system for Quality of Life: Each item have 3-point Likert scale "never, sometimes, and always."." These are scored from one to three respectively. The scores of the items of each of the four categories and of the total scale are summed-up so that a higher score indicates a higher adverse effect of visual dysfunction on QOL, while lower score indicates good QOL. The total score converted into percent scores. A score of 60% or more was considered as low QOL, whereas a score less than 60% were considered high QOL. The total score converted into percent scores as:

- Higher QOL < 60 (14-25).
- Lower QOL ≥ 60 (25-42).

Validity

The developed tool was formulated and submitted to five experts in geriatric nursing to assess the content validity, needed modifications will be done.

Reliability

Reliability of the tools was tested to determine the extent to which the questionnaire items related to each other. Cronbach's Alpha in this study found to be (0.89) for knowledge (0.91) for Practice and (0.92) for quality of life.

Result

Table (1) Illustrates that, 87.5% of studied sample their age between 60-<70 with mean of age 65.4±0.5 , while 82.9 % of them were male , 66.6 % of them were lived in rural area. Also , 87.5 % of them were married. Regarding to level of education 50.0% of them had secondary education. As regards living condition founded, 87.5 % of studied sample were lived with wife or husband, concerning to source of income , 83.4 % of them the source of income was pension and 54.1 % of them the monthly income were not enough.

Figure (1): Illustrates that, 80.0% of studied sample had unsatisfactory knowledge about cataract while 20.0% of them had satisfactory knowledge about cataract.

Figure (2): Illustrates that, 60.0% of studied sample had inadequate reported practice about cataract, while 40.0% of them had adequate reported practice about cataract.

Figure (3): Illustrates that, 71.8% of the studied sample had poor quality of life while 28.2% of them had good quality of life.

Table (2): shows that, there were highly statistically significant relation between total scores of QOL of studied sample and their age, place of residence, marital status, level of education and monthly income at(p= <0.001).

Table (3): shows that, there were highly statistically significant relation between total scores of knowledge of studied sample and their age, level of education and monthly income at(p= <0.001).

Table (4): Shows that, there were highly statistically significant relation between total scores of reported practice of studied sample and their age, sex , residence, marital status, level of education and monthly income at(p= <0.001).

Table (5): shows that, there was highly significant positive correlation between total knowledge scores and total QOL scores regarding cataract among the studied sample at(p= <0.001**) &(r=0.38)

Table (6): shows that, there was highly significant positive correlation between total reported practices scores and total QOL scores regarding cataract among the studied sample at(p= <0.001**)&(r=0.42)

Table (7): shows that, there was highly significant positive correlation between total knowledge scores and total reported practice scores regarding cataract among the studied sample at(p= <0.001**) &(r=0.37)

Result

Table (1) Demographic characteristics for elderly patients with cataracts (n=240)

Demographic characteristics	No.	%
Age:-(years)		
60 - <70	210	87.5
70 - <80	25	10.4
≥80	5	2.1
Mean ± SD 65.4±0.5		
Sex:-		
Male	199	82.9
Female	41	17.1
Place of residence:-		
Urban	80	33.4
Rural	160	66,6
Marital status:-		
Divorced	10	4.2
Married	210	87.5
Widow	20	8.3
Educational level:-		
Don't read and write	20	8.3
read and write	30	12.5
Basic education	60	25.0
Secondary education	120	50.0
University education and more	10	4.2
Living condition:-		
Wife or husband	210	87.5
Alone	5	2.1
Sons	20	8.3
With friends at Geriatric home	5	2.1
Source of income:-		
The Ministry of Social Solidarity	20	8.3
Pension	200	83.4
Agriculture	20	8.3
Monthly income:-		
Enough	90	37.5
Not enough	130	54.1
Save &Enough	20	8.3

Figure (1): Total knowledge scores of elderly patients about cataract (n=240)

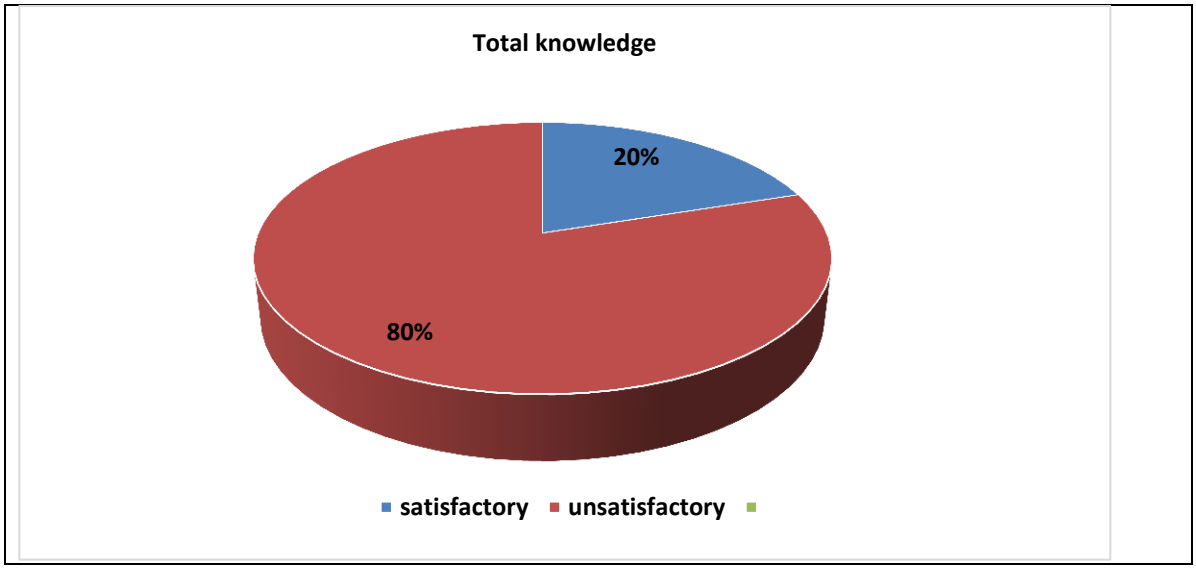

Figure (2): Total reported practices score of elderly patients about cataract (n=240)

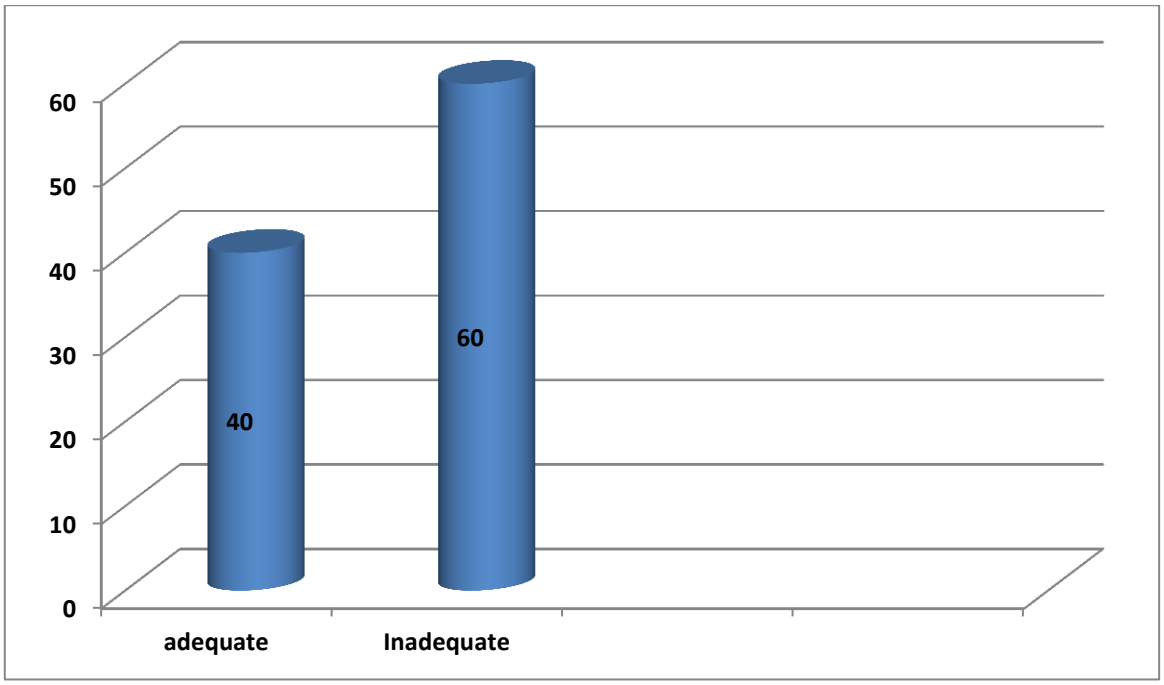

Figure (3): Total Quality of Life scores of the studied elderly patients regarding cataract (n=240)

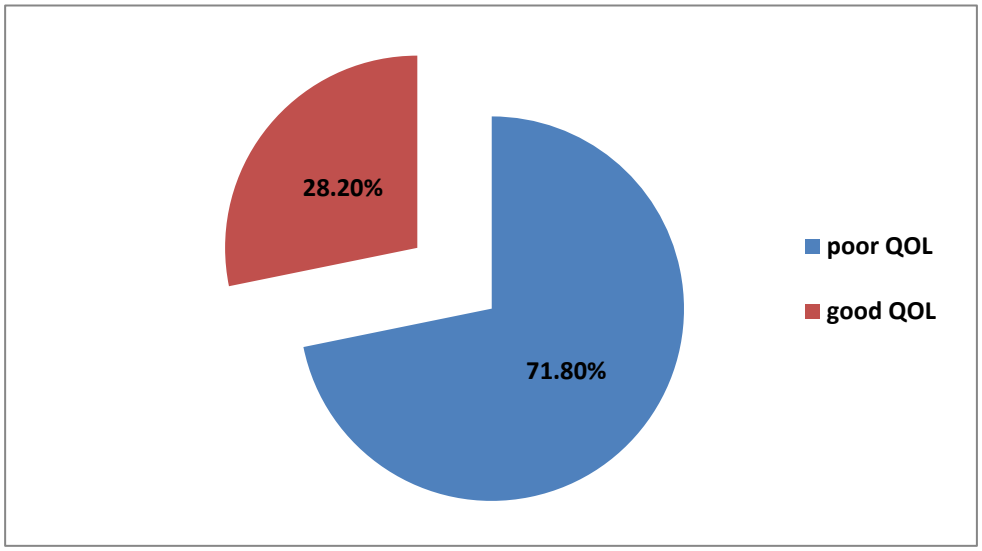

Table (2): Relation between demographic characteristics of the studied elderly patients and QOL scores about cataract (n=240)

Demographic characteristics	Total QOL				χ^2	P
	Poor (n=172)		Good (n=68)			
	No.	%	No.	%		
Age:						
60-<70 years	150	87.2	60	88.3		
70-<80 years	20	11.6	5	7.3		
≥80years	2	1.2	3	4,4	19.47	<0.001**
Sex:						
Male	140	81.3	59	86.7		0.32
Female	32	18.7	9	13.3	1.003	NS
Residence:						
Urban	50	29.1	30	44.2		
Rural	122	70.9	38	55.8	15.97	<0.001**
Marital status:						
Married	160	93.1	50	73.5		
Divorced	2	1.1	8	11.7		
Widow	10	5.8	10	14.8	17.42	<0.001**
Level of education:						
Don't read	10	5.8	10	14.7		
and write Read and write	20	11.6	10	14.7		
Basic education	30	17.4	30	44.2		
Secondary education	107	62.3	13	19.2		
University or more	5	2.9	5	7.2	19.21	<0.001**
Monthly income:						
Enough	78	45.3	12	17.6		
Not enough	83	48.2	47	69.1		
Save &Enough	11	6.5	9	13.2	17.02	<0.001**

Table (3): Relation between demographic characteristics of the studied elderly patients and total knowledge scores about cataract (n=240)

Demographic characteristics	Total knowledge score				χ^2	P
	Satisfactory (n=48)		Unsatisfactory (n=192)			
	No.	%	No.	%		
Age:						
60<70 years	30	62.5	180	93.8		
70<80 years	15	31.3	10	5.2		
≥80years	3	6.2	2	1.0	19.47	<0.001**
Sex:						
Male	30	62.5	169	88.1		0.32
Female	18	37.5	23	11.9	1.003	NS
Residence:						
Urban	13	27.1	67	34.8		0.64
Rural	35	72.9	125	65.2	3.418	NS
Marital status:						
Married	40	83.3	170	88.5		
Divorced	5	10.5	5	2.7		0.773
Widow	3	6,2	17	8.8	0.84	NS
Level of education:						
Don't read and write Read and write	5	10.5	15	7.8		
Basic education	10	20.8	20	10.4		
Secondary education	20	41.6	40	20.8		
University or more	8	16.6	112	58.3		
	5	10.5	5	2.7	19.21	<0.001**
Monthly income						
Enough	27	56.3	63	32.8		
Not enough	14	29.1	116	60.4		
Save & Enough	7	14.6	13	6.8	17.02	<0.001**

Table (4): Relation between demographic characteristics of the studied elderly patients and total reported practice about cataract (n=240)

Demographic characteristics	Total reported practice				χ^2	P
	Adequate (n=96)		Inadequate (n=144)			
	No.	%	No.	%		
Age(years **)**						
60-<70	83	86.4	127	88.2		
70-<80	10	10.4	15	10.4		
≥80	3	3.2	2	1.4	17.43	<0.001**
Sex:						
Male	76	79.2	123	85.5		
Female	20	20.8	21	14.5	15.63	<0.001**
Residence:						
Urban	40	41.6	40	27.7		
Rural	56	58.4	104	72.3	16.88	<0.001**
Marital status:						
Married	85	88.5	125	86.8		
Divorced	5	5.2	5	3.4		
Widow	6	6.3	14	9.8	16.34	<0.001**
Level of education:						
Don't read and write	5	5.2	15	10.4		
Read and write	10	10.4	20	13.9		
Basic education	25	26.1	35	24.4		
Secondary education	51`	53.1	69	47.9		
University or more	5	5.2	5	3.4	17.99	<0.001**
Monthly income						
Enough	36	37.5	54	37.5		
Not enough	51	53.1	79	54.8		
Save & Enough	9	9.3	11	7.6	16.55	<0.001**

Table (5): Correlation between total knowledge scores and total quality of life scores regarding cataract among studied elderly patients (n=240).

Total QOL scores	Total knowledge scores				r	P
	Satisfactory (n=48)		Unsatisfactory (n=192)			
	No.	%	No.	%		
Poor (n= 172)	33	68.7	139	72.3		
Good (n=68)	15	31.2	53	27.6	0.38	<0.001**

Table (6): Correlation between total reported scores and total quality of life scores regarding cataract among studied elderly patients (n=240).

Total QOL scores	Total reported practice scores				r	P
	Adequate (n=96)		Inadequate (n=144)			
	No.	%	No.	%		
Poor (n= 172)	67	69.7	105	72.9		
Good (n=68)	29	30.2	39	27	0.42	<0.001**

Table (7): Correlation between total reported practice scores and total knowledge scores regarding cataract of the elderly patients (n=240).

Total reported practice scores	Total knowledge scores				r	P
	Satisfactory (n=48)		Unsatisfactory (n=192)			
	No.	%	No.	%		
Adequate (n=96)	35	72.9	61	31.7		
Inadequate (n=144)	13	27	131	68.2	0.37	<0.001**

Discussion

Cataract is loss of optical uniformity of the crystalline lens, develops gradually extending from minimal changes of original transparency of the lens to total opacity. Cataract may result in trouble driving, reading or recognizing faces. Poor vision may also result in an increased risk of falling and depression. Cataracts are the cause of half of blindness and 33% of visual impairment worldwide(**Lee et al., 2021).**

Regarding elderly patients' age, the current study showed that, majority of studied sample their age between 60-<70 . This result was in agreement with **Mohamed et al., (2018)** whose conducted a published study in Egypt entitled as "Quality Of Life of Elderly Patients with Cataract" and found that majority of participants were age between 60-<70 years. From the investigator point of view, this result might be due to this age group considered high risk for cataract disease

Regarding elderly patients' gender, the current study showed that more than four fifths of studied patient were male. This result was supported with **Gholamzadeh et al., (2018) w**hose conducted a published study in Iran entitled as "The role of preoperative knowledge and self-efficacy in predicting postoperative anxiety, depression, and vision-related quality of life in elderly patients with macular degeneration undergoing cataract surgery" and found that 83% of participants were male. Conversely, this result was in disagreement with **Faria et al., (2021) w**hose conducted a published study in Brazil entitled as "Quality of life assessment in elderly patients before and after cataract surgery" and found that more than half of participants were female. From the investigator point of view, these results might be due to bad habits as smoking and alcohalism in male more than females .

Regarding elderly patients' residence, the current study showed that two thirds of them were lived in rural area. This result was in agreement with **Li et al., (2018) w**hose conducted a published study in America entitled as "Cataract surgery outcomes in the very elderly" and found that more than half of elderly people were lived in rural area. On the other hand, this result was in disagreement with **Verdina et al., (2021) w**hose conducted a published study in Italy entitled as "Evaluation of the impact of cataract surgery on cognitive function in very elderly patients" who found that more than three quarters of participants were lived in urban area. From the investigator point of view, this result may be due to lower social economic status a risk factor for cataract in rural area than urban.

Regarding marital status of elderly patient's , the current study showed that majority of them were married. This result was in agreement with **Ni et al., (2020) w**hose conducted a published study in China entitled as "The impact of cataract surgery on vision-related quality of life for cataract patients" and found that majority of participants were married. From the investigator point of view, this result may be due to normally people in their ages were married and consisted of family.

Regarding to level of education, the current study showed that half of studied patients had secondary

education. This result was congruence with **Ye et al., (2020) w**hose conducted a published study in China entitled as "Knowledge about benefits and risks of undergoing cataract surgery among cataract patients" and found that half of participants had secondary education. In contrast, this result was in disagreement with **Mohamed et al., (2018)**" whose found that majority of participants had basic education. From the investigator point of view, this difference may be due to elderly patients that participated in this study live in rural area and due to decrease awareness about the importance of education.

As regards living condition , the current study revealed that majority of studied sample was lived with wife or husband. This result was supported with **Miura et al., (2021) w**hose conducted a published study in Japan entitled as "Effects of Cataract Surgery on Vision-Related Quality of Life in Patients with Retinitis Pigmentosa and the Predictive Factors of Quality of Life Improvement" and found that majority of participants were lived with their families. From the investigator point of view, this result may be due to elderly in this age were lived with their wives or husband and majority patients with cataract were inability to care themselves.

Concerning to source of income, the current study revealed that more than four fifths of them the source of income was pension. This result was congruence with **Smirthwaite et al., (2017)** who conducted a study in Sweden entitled as "Inequity in waiting for cataract surgery - an analysis of data from the Swedish National Cataract Register" and found that 84% of participants had income from pension. In contrast, this result was in disagreement with **Pereira et al., (2021)** who conducted a study in Brazil entitled as "Evaluation of visual function and vision-related quality of life in patients with senile cataract" and found that 30% of participants the source of income was pension. From the investigator point of view, this result may be due to elderly people were leaved their jobs and had income from pension.

Regarding to monthly income, the finding of the current study revealed that, more than half of the studied elderly patient their monthly income not enough. These result approved with the study performed by **Fikrie et al., (2021) w**hose conducted a published study in s Ethiopia entitled as " Knowledge about cataract and associated factors among adults " whose stated that 57% of the studied sample their monthly income were not enough. From the investigator point of view, these results might be due to the high cost of living and insufficient monthly income

Regarding total knowledge scores of elderly patients about cataract, the current study illustrated that four fifths of studied sample had unsatisfactory knowledge about cataract while one fifth of them had satisfactory knowledge about cataract. This result was accordance with **Rampersad and Zitha (2020)** who conducted a study in South Africa entitled as "Impact of cataract surgery on vision-related quality of life" found that 81% of elderly people had unsatisfactory knowledge about cataract disease. Conversely, this result was in disagreement with **Lee et al., (2021)** who conducted a study in South Korea entitled as "Relationship between Cataract Surgery and Mortality in Elderly Patients with Cataract" and found that more than half of elderly patients had satisfactory knowledge about cataract disease. From the researcher point of view, this result may be due to elderly people needed to more information to increase their knowledge about cataract disease.

Regarding total reported practices score of elderly patients about cataract, the current study illustrated that, more than half of studied sample had inadequate reported practice about cataract, while two fifth of them had adequate reported practice about cataract. This result was accordance with **Pereira, et al., (2021)** whose found that 58% of participants had inadequate practice about cataract. Conversely, this result was in disagreement with **Alshammari, et al., (2019)** whose found that half of elderly patients had adequate practice about cataract. From the investigator point of view, this result may be due to elderly patients needed to enhance their skills about practice related to cataract.

Regarding total quality of life of elderly patients with cataract, the current study illustrated that, less than three quarters of the studied sample had poor quality of life while more than one quarter of them had good quality of life . This result was supported with **Kurian et al., (2018)** whose conducted a study in India entitled as **"**Determinants of vision function related quality of life of patients undergoing unilateral cataract surgical services in charitable hospitals " and found that more than three fifths participants had bad quality of life. Conversely, this result was in disagreement with **Al Habash and Nagshbandi, (2020)** whose found that less than two fifths of participants had good quality of life.. From the investigator point of view, this result may be due to elderly patients needed to improve their life with cataract disease.

Regarding relation between demographic characteristics of the studied elderly patients and QOL scores about cataract, the current study showed that, there were highly statistically significant relation between total scores of QOL of studied sample and their age, place of residence, marital status, level of education and monthly income. This result was supported with **El-banna et al., (2019) w**hose conducted a published study in Egypt entitled as "Relationship between Visual Impairment of Elderly and Their Quality of Life" and found that there were a statistically significant relation between quality of life of studied sample and their age, gender, level of education and residence.

Also, this result was in agreement with **Vignesh, et al., (2020) w**hose conducted a published study in India entitled as "Prevalence of cataract and its association with vision-related quality of life among elderly persons in a resettlement colony of Delhi" and found that there were statistically significant relation between quality of life of studied sample and their demographic characteristics as age and gender. From the investigator point of view, they explain that quality of life was negative among studied sample who had low educational level and who had insufficient monthly income.

Regarding relation between demographic characteristics of the studied elderly patients and total knowledge scores about cataract, the current study showed that, there were highly statistically significant relation between total scores of knowledge of studied sample and their age, level of education and monthly income. This result was in agreement with **El-banna et al., (2019)** whose found that there were a statistically significant relation between knowledge of studied sample and their age, gender, level of education and residence. Also, this result was agreement with **Ye et al., (2020)** whose found that there were statistically significant relation between knowledge of studied sample and their gender, occupation, and monthly income. From the investigator point of view, these result may be due to elderly had unsatisfactory knowledge about cataract.

Regarding relation between demographic characteristics of the studied elderly patients and total reported practice about cataract, the current study showed that, there were highly statistically significant relation between total scores of reported practice of studied sample and their age, sex, residence, marital status, level of education and monthly income. This result was in agreement with **Rampersad and Zitha, (2020)** whose found that there were a statistically significant relation between practice of studied sample and their age, gender, level of education, marital status and residence. From the investigator point of view, this result may be due to patients' education enhanced performance with cataract, marital status effect on practice of patients with cataract because need assistant from spouse.

Regarding correlation between total knowledge scores and total quality of life scores about cataract among studied elderly patients, the current study showed that, there was highly significant positive correlation between total knowledge scores and total QOL scores regarding cataract among the studied sample. This result was in agreement with **Murthy et al., (2018)** whose conducted a published study in Sri Lanka entitled as "Impact of blindness, visual impairment and cataract surgery on quality of life and visual functioning among adults aged 60 years and above" and found that there was a significant positive correlation between total knowledge scores and total QOL scores regarding cataract. From the investigator point of view, this result may be due to that satisfactory knowledge of patient with cataract makes patients able to manage disease and improve quality of life.

Regarding correlation between total reported scores and total quality of life scores about cataract among studied elderly patients, the current study showed that, there was highly significant positive correlation between total reported practices scores and total QOL scores regarding cataract among the studied sample. This result was supported with **Al Habash, & Nagshbandi, (2020)** found that there was highly significant positive correlation between total reported practices scores and total QOL scores regarding cataract. From the investigator point of view, this result may be due adequate reported practice improve quality of life about cataract among studied elderly patients.

Regarding correlation between total reported practice scores and total knowledge scores about cataract among studied elderly patients, the current study showed that, there was highly significant positive correlation between total knowledge scores and total reported practice scores regarding cataract among the studied sample. This result was accordance with **Makabe, et al., (2020)** whose found that there was highly significant positive correlation between total knowledge scores and total reported practice scores regarding cataract. From the investigator point of view, this result may be satisfactory knowledge patients with cataract improve total reported practice related cataract among studied elderly patients.

Conclusion

In the light of results of the current study and answers of the research questions, it concluded that , there was 80.0% of studied sample had unsatisfactory knowledge about cataract while 20.0% of them had satisfactory knowledge about cataract. also, 60.0% of studied sample had inadequate reported practice about cataract ,while 40.0% of them had adequate reported practice about cataract . there is 71.8% of the studied sample had poor quality of life while 28.2% of them had good quality of life. There were highly statistically significant relation between total scores of QOL of studied sample and their age, place of residence, marital status, level of education and monthly income at($p= <0.001$).

Recommendations

On the light of the current study findings, the following recommendations are suggested.

1. Elderly people need regular checkup of their visual functions for early detection and prompt management of any disorders.
2. Educational interventions are proposed to improve elderly people's knowledge of the causes of impaired visual functions, especially cataract
3. Health education programs are recommended to help those elderly have a healthy lifestyle, with

encouragement of practicing physical activities, eating balanced diet, and quitting smoking.

4. Counseling programs should be organized to improve the quality of life of elderly people, including social and recreational activities.
5. Further research on a large sample and other setting is needed.

References

1. **Abd Allah,E,S., Shafik,S,A & Abd Elkhalid,A,A.,(2019)** :- Assess Sleep Quality by Nutritional Awareness among Elderly Women in geriatric home" IOSR Journal of Nursing and Health Science (IOSR-JNHS), vol. 8, no.01 , pp. 27-41
2. **Al Habash, A., & Nagshbandi, A. A. (2020):-** Quality of life after combined cataract and minimally invasive cataract surgery in elderly patients. Clinical Ophthalmology (Auckland, NZ), 14, 3049.
3. **Alshammari, S. A., Alhamidi, R. A., Nasser, A., Badukhon, A. M. A., Alhawamdeh, S. T., Alanazi, R. A., & Alhamdi, D. A. (2019**): Quality of life of visually impaired elderly patients in King Khalid University Hospital outpatient clinics. DOI:10.24911/ijmdc.51-1592588283
4. **Berríos-Dolz, V., Chirinos-Saldaña, P., & Adrianzén, R. E. (2020).** Effect of cataract surgery on contrast sensitivity and quality of life in patients with different types of cataract. Revista mexicana de oftalmología, 94(2), 68-76.
5. **Berríos-Dolz, V., Chirinos-Saldaña, P., & Adrianzén, R. E. (2020):-** Effect of cataract surgery on contrast sensitivity and quality of life in patients with different types of cataract. Revista mexicana de oftalmología, 94(2), 68-76.
6. **Çavdar, R.N. & Türkleş, Serpil. (2020).** The Relationship Between Depression and Quality of Life in Elderly Patients with Glaucoma. Progress in Health Sciences. 10. 55-64. 10.5604/01.3001.0014.6589.
7. **Duman, F., Kılıç, Z., & Özcan-Ekşi, E. E. (2019**). Impact of cataract surgery on functional balance skills of adults. Turkish journal of ophthalmology, 49(5), 243.
8. **El-banna, M. A., Ismail, G. M., & Sharaa, H. M. (2019).** Relationship between Visual Impairment of Elderly and Their Quality of Life. Saudi J Nurs Health Care; 2(5): 189-196.
9. **Faria, V. D. S., Borges, L. L., Cordeiro, J. A. B. L., Silva, A. M. T. C., & Almeida, R. J. D. (2021).** Quality of life assessment in elderly patients before and after cataract surgery. Rev. bras. oftalmol., 80(5).
10. **Fikrie, A., Mariam, Y. G., Amaje, E., & Bekele, H. (2021).** Knowledge about cataract and associated factors among adults in Yirgalem town, Sidama National Regional State, southern Ethiopia, 2020: a community based cross sectional study design. BMC ophthalmology, 21(1), 79. https://doi.org/10.1186/s12886-021-01844-3
11. **Flayeh,M., (2017)**:- Effectiveness of An Instructional Program on Adult Cataract Patients' Knowledge Concerning Prevent Post-Operative Complications At Ibn AL-Haitham Teaching Eye Hospital In Baghdad City ." IOSR Journal of Nursing and Health Science (IOSR-JNHS) , vol. 6, no. 5, pp. 79–84.
12. **Gholamzadeh, S., Sharifi, S. S., & Zarshenas, L. (2018).** The role of preoperative knowledge and self-efficacy in predicting postoperative anxiety, depression, and vision-related quality of life in elderly patients with macular degeneration undergoing retinal surgery in Shiraz, Iran, 2016. Shiraz E-Medical Journal, 19(9).
13. **Keay, L., Lindsley, K., Tielsch, J., Katz, J., & Schein, O. (2019).** Routine preoperative medical testing for cataract surgery. Cochrane Database of Systematic Reviews, (1). https://doi.org/10.1002/14651858.CD007293.pub4
14. **Kurian, E., Vishwakarma, P., Deenadayalan, J., Mondal, A., Ranpise, D., Chavan, S., & SG, P. K. (2018).** Determinants of vision function related quality of life of patients undergoing unilateral cataract surgical services in charitable hospitals in India: a multicentre prospective cohort study. International Journal of Community Medicine and Public Health, 5(3), 1138.
15. **Lee, H., Kim, J. Y., Lee, J. S., & Tchah, H. (2021).** Relationship Between Cataract Surgery and Mortality in Elderly Patients with Cataract: Nationwide Population-Based Cohort Study in South Korea. Journal of personalized medicine, 11(11), 1128. https://doi.org/10.3390/jpm11111128
16. **Li, E., Margo, C. E., & Greenberg, P. B. (2018).** Cataract surgery outcomes in the very elderly. Journal of Cataract & Refractive Surgery, 44(9), 1144-1149.
17. **Makabe, K., Oshika, T., Inamura, M., Hayashi, K., Sugita, G., Kozawa, T., & Fujishima, K. (2020**). Influence of cataract surgery for the first or second eye on vision-related quality of life (VR-QOL) and the predictive factors of VR-QOL improvement. Japanese Journal of Ophthalmology, 64(5), 468-477.
18. **Miura, G., Baba, T., Tatsumi, T., Yokouchi, H., & Yamamoto, S. (2021**). Effects of Cataract Surgery on Vision-Related Quality of Life in Patients with Retinitis Pigmentosa and the Predictive Factors of Quality of Life Improvement. BioMed Research International,

vol. 2021, Article ID 3846867, 6 pages. https://doi.org/10.1155/2021/3846867

19. **Miyata, K., Yoshikawa, T., Morikawa, M., Mine, M., Okamoto, N., Kurumatani, N., & Ogata, N. (2018).** Effect of cataract surgery on cognitive function in elderly: Results of Fujiwara-kyo Eye Study. PLoS One, 13(2), e0192677.
20. **Mohamed, N. M., Abdalla, E. S., & Ali, H. H. (2018**). Quality Of Life of Elderly Patients with Cataract. Zagazig Nursing Journal, 14(1), 118-132.
21. **Murthy, G. V. S., Schmidt, E., Gilbert, C., Edussuriya, K., & Pant, H. B. (2018).** Impact of blindness, visual impairment and cataract surgery on quality of life and visual functioning among adults aged 60 years and above in Sri Lanka. Ceylon Medical Journal, 63(5), 26-26.
22. **Ni, J., Xu, X., & Mima, Z. (2020).** The impact of cataract surgery on vision-related quality of life for cataract patients in China: a prospective study. a prospective study. Research Square; DOI: 10.21203/rs.2.23913/v1.
23. **Pereira, N. B., Chaves, M. R., Pereira, G. V., Ramos, L. F. L., Gonçalves, C. T., Lafetá, B. N., ... & Santo, L. R. E. (2021).** Evaluation of visual function and vision-related quality of life in patients with senile cataract. Revista Brasileira de Oftalmologia, 80, 111-116.
24. **Rampersad, N., & Zitha, A. J. (2020).** Impact of cataract surgery on vision-related quality of life. African Vision and Eye Health, 79(1), 1-12. a498. https://doi.org/10.4102/aveh.v79i1.498
25. **Shafrin J, Sullivan J, Goldman DP, Gill TM (2017) The** association between observed mobility and quality of life in the near elderly. PLoS ONE 12 (8): e0182920. https://doi.org/10.1371/journal. pone.0182920
26. **Smirthwaite, G., Lundström, M., Wijma, B. et al. (2017).** Inequity in waiting for cataract surgery - an analysis of data from the Swedish National Cataract Register. Int J Equity Health 15, 10 https://doi.org/10.1186/s12939-016-0302-3
27. **Trikkalinou, A., Papazafiropoulou, A. K., & Melidonis, A. (2017).** Type 2 diabetes and quality of life. World journal of diabetes, 8(4), 120–129. https://doi.org/10.4239/wjd.v8.i4.120
28. **Verdina, T., Stiro, F., Bruni, F., Spedicato, G. A., Mastropasqua, R., & Cavallini, G. M. (2021).** Evaluation of the impact of cataract surgery on cognitive function in very elderly patients: a prospective, observational study. Aging Clinical and Experimental Research, 1-9.
29. **Vignesh, D., Gupta, N., Kalaivani, M., Goswami, A. K., Nongkynrih, B., & Gupta, S. K. (2020).** Prevalence of visual impairment and its association with vision-related quality of life among elderly persons in a resettlement colony of Delhi. Journal of family medicine and primary care, 8(4), 1432.
30. **World population Egypt (2019):-** Retrived from: https://www.worldometers.info/world-population/egypt-population/
31. **World population prospects (2019)**.Retrived from:https://www.un.org/development/desa/publications/world-population-prospects-2019-highlights.html
32. **Ye, G., Qu, B., Shi, W., Chen, X., Ma, P., Zhong, Y., ... & Zheng, Y. (2020).** Knowledge about benefits and risks of undergoing cataract surgery among cataract patients in Southern China. International Ophthalmology, 40(11), 2889-2899.