

## Needs Assessment Of Patients Undergoing Cataract Surgery At Mansoura University Ophthalmic Center

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### Abstract

**Background:** In Egypt, cataract is the major cause of blindness of the population. Inadequate patients' needs may lead to serious complications for the patient with cataract surgery.

**Aim of the study:** assess needs of the patients undergoing cataract surgery at Mansoura University, ophthalmic center.

**Method:** A descriptive research design was used.

**Subjects:** Purposive sample of (100) newly cataract patients, adults from both genders. .

**Tools:** Two tools were used for data collection. Tool (1): Needs assessment for patients undergoing cataract surgery questionnaire sheet: Tool (2): Hamilton Anxiety Rating Scale.

**Results:** There are highly statistically significance differences with  $p < 0.001$  between needs pre/post surgery in which mostly of the studied sample (98.0%) needed educational needs about the cataract surgery, while three quarters of them (77.0%) had physical needs.

**Conclusion:** The health needs among patients undergoing cataract surgery were physical, social, physiological, spiritual and educational needs. With highly statistically significance differences with  $p < 0.001$  between needs before and after surgery.

**Recommendation:** Development of an educational program for patients' with cataract about the essential needs for the patients undergoing cataract surgery to improve patients' knowledge and decrease the possible complication.

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### I. Introduction

Cataract, defined as loss of optical uniformity of the crystalline lens, develops gradually extending from minimal changes of original transparency of the lens to total opacity (WHO, 2013), leading to impairment of patient's visual acuity to mere distinction between light and dark (Casparis. 2012). Since its prevalence increases with age, the world's population aging is associated with increasing incidence of cataract-induced visual dysfunction and blindness. Hence, it is now a global problem so that everyone in the nineties is affected (Randleman, 2014). It is estimated that more than 82.0% of all blindness occurring in individuals aged 50 and cataract surgery is usually recommended (Miller, 2009). The cure for cataract is surgery to remove the natural lens and replace it with a new, artificial one. It is one of the safest and most successful procedures performed, but this is not equally available to all, and the surgery which is available does not produce equal outcomes. Readily available surgical services capable of delivering good vision rehabilitation must be acceptable and accessible to all in need, no matter what their circumstances (Trent & Albright 2014). Cataract surgery is a process that can be safely performed even in outpatient clinics (Koolwijk et al, 2015). With the varied practices for cataract surgery and the increasing number of cases, there is room for better service organization in hospitals in terms of better staff preparation time to improve outcomes (Olali et al, 2010) A patient who needs to undergo cataract surgery must be evaluated in a thorough manner so as to establish the requirement, appropriateness, influential co-morbid conditions, expected surgical problems and benefits (Vincent & Patalano, 2012). The nurses should assess the patient's basic needs and intervene to assist to meet these needs. According to the Department of Health, needs are the requirements of individuals to enable them to achieve, maintain or restore an acceptable level of social independence or quality of life (Mansfield et al, 2011). Hence, recognizing the needs of patients with cataract surgery and understanding their physiological, psychological, and spiritual needs are essential skills for the ophthalmic nurse who should incorporate them in the form of nursing intervention (Potter & Perry, 2011).

Inadequate postoperative nursing care may lead to serious complications for the patient with cataract surgery (Surrena, 2009).

## **II. Subject And Methods**

### **2.1 Research Design**

A descriptive exploratory research design was used in this study.

### **2.2 Setting:-**

The study was carried out in outpatient clinic, Inpatient wards of ophthalmic center at Mansoura University.

### **2.3 Subjects:-**

Purposive sample of (100) adult cataract patients from both genders from the above mentioned setting and Fulfill the following inclusion and exclusion criteria.

### **2.4 Inclusion criteria:-**

Patients who are undergoing cataract surgery for the first time.

Patients have no speech or listening disorders.

Patients are willing to participate in the study

### **2.5 Exclusion criteria:-**

Patients with ocular co – morbid conditions such as glaucoma, uvetitis, retinopathies.

### **2.6 Tools of data collection:-**

Two tools were used for data collection.

Tool (1): Needs assessment for patients undergoing cataract surgery questionnaire sheet through interview: Was developed by the investigator after reviewing the related literature and consulting the experts to determine patients needs regarding cataract surgery. It was written in simple Arabic language. It consists of 68 questions and divided into 4 main parts as following:

#### **2.7 Part I:** Patient Sociodemographic data and medical history:

I-Patient Sociodemographic data which included ( age, gender, marital status, educational level, occupation, and smoking).

ii -Patients' medical history

Past history: any other chronic diseases  
present medical, patient main complain.

**2.8 Part II:** Patients' needs assessment sheet pre operative which used to assess patients' needs before surgery. It consists of 18 items and includes 4 categories. Physical needs (needs of patients directly before surgery), spiritual and psychological needs, social and educational needs. Scoring system: It was consisted of 18 questions in total. 16 questions were yes or no questions and 2 were multiple choice questions (MCQ). A correct answer was scored zero and an incorrect answer scored 1. Scores of each item were summed up and total score ranged from (0-18). The total patients scores were collected and evaluated as following: Don't need from (0 to 60%). Need more than 60% considered as need ( Campbell et al, 2009 Hickman et al, 2010; Casparis et al, 2012 and Vincent & Patalano, 2012).

**2.9 Part III:** Patients' needs assessment sheet post operative which used to evaluate patients needs after surgery. It had 19 items in total and include 4 categories, physical need of patients directly after the surgery, social needs, psychological and spiritual needs after surgery. Scoring system: It was consisted of 19 questions in total. 15 questions were yes or no questions and 4 were multiple choice questions (MCQ). A correct answer was scored zero and an incorrect answer scored 1. Scores of each item were summed up and total score ranged from (0-19). The total patients scores were collected and evaluated as following: Don't need from (0 to 60%) Need more than 60% considered as need ( Campbell et al, 2009 Hickman et al, 2010; Casparis et al, 2012 and Vincent & Patalano, 2012).

**2.10 Part IV:** Patients' needs assessment sheet before discharge from the hospital: It composed of 22 items in one category only educational needs of the patients before discharge.

Scoring system: It included 22 questions in total. 20 questions were in the form of yes or no questions and 2 were multiple choice questions (MCQ). A correct answer was scored zero and an incorrect answer scored 1. The total score was 22 marks and graded as the following : Don't need from (0 to 60%) Need more than 60% considered as need ( Campbell et al, 2009 Hickman et al, 2010; Casparis et al, 2012 and Vincent & Patalano, 2012).

### **Tool (2): Hamilton Anxiety Rating Scale:**

It was developed by Hamilton and was modified by the investigator . This scale formed of fourteen variables: anxious mood, tension, insomnia, memory changes, cognitive changes, depression, behavior during interview, sensory, cardiovascular, respiration, gastrointestinal, Genitourinary, autonomic and muscular symptoms. This scale formed of thirteen variables: anxious mood, tension, insomnia, cognitive changes, depression, somatic (sensory), cardiovascular, respiration, gastrointestinal, Genitourinary, autonomic symptoms, somatic (muscular) and the behavior at the interview. Responses were from (0-3) scores and the total score ranged from 0-39 according to

patients' responses, the following classifications were adapted: no anxiety (zero), mild anxiety (0 – less than 23), moderate anxiety (23 - less than 29) and severe anxiety (29 - 39). Testing reliability of the scale items using alpha cronbach test = 0.92.

### **III. Method**

1. Official approval for conducting the study was obtained from faculty of nursing Mansoura University as well as the ethical committee of faculty of nursing of Mansoura University.
2. Official approval for conducting the study was obtained from the responsible administrative personnel of ophthalmic Center-Mansoura University.
3. Tool 1 was developed by the investigator after reviewing the related literature and consulting the experts to determine patients' health needs regarding cataract surgery.
4. Hamilton Anxiety Rating Scale: It was developed by Hamilton and was modified by the investigator and was translated into simple Arabic language. This scale formed of fourteen variables: anxious mood, tension, insomnia, memory changes, cognitive changes, depression, behavior during interview, sensory, cardiovascular, respiration, gastrointestinal, Genitourinary, autonomic and muscular symptoms
5. Tools were tested for content-related validity by 5 experts from Mansoura University (two professors of Surgical Department Faculty of Medicine and three assistant professor of Medical Surgical Nursing) Arabic tool for clarity, relevance, understanding, and applicability for implementation. According to their opinions minor modifications were done.
6. Verbal explanation of the aim and the nature of the study were explained to all patients to gain their cooperation in data collection.
7. A pilot study was carried out on 10% of patients undergoing cataract surgery before starting the data collection, to evaluate ambiguity, clarity and applicability of the tool, and the approximate time needed for answering the questionnaire. Those patients were excluded from the study.
8. Based on the results obtained from the pilot study, necessary modifications were done.
9. The reliability of the developed tools was estimated using the Cronbach's Alpha test to measure the internal consistency of the tools. Testing reliability of patients needs items was done using alpha cronbach test: Physical needs = 0.94, social needs = 0.84, psychological needs = 0.93, spiritual needs = 0.81 and educational needs = 0.91. It was found that, the reliability for the supportive care needs questionnaire using Cronbach's Alpha equation was ( $r = 0.815$ ).
10. The investigator started data collection by introducing herself and explaining the purpose of the study for the study participant.
11. Patients were interviewed in the day of admission to hospital then early in the day of the surgery then immediately after the surgery finally the day before discharge.
12. The investigator collected data from 3 to 5 patients every three days until their discharge.
13. Time taken for answering the questionnaire ranged from 20-25 minutes depending on the degree of understanding and response of the patient.
14. Data collection started from the beginning of August to the end of December 2015.
15. The investigator coded the questionnaires to assure the anonymity of the subjects. Finally, the investigator scored the responses, and compiled them for data analysis.

### **IV. Ethical Considerations**

1. Verbal consents were obtained from patients who accepted to participate voluntarily in this study after illustrating the aim and nature of the study.
2. Privacy of the patients was assured and confidentiality of the collected data was maintained.
3. Patients were told that participation in the study was entirely voluntary and the care they received wouldn't be affected by their decision to participate or not.
4. The patients have the right to withdraw from the study at any time without giving any reasons.

### **V. Limitation of the Study**

1. Although there were many patients with cataract surgery a few of them were performing the surgery for the first time.
2. Most of patients were old adult.

### **VI. Statistical Analysis**

Data was computed, tabulated, and statistically analyzed using spss version 16 (statistical package of social sciences). The descriptive table represent data in number and percentages, while data for comparisons presented in average  $\pm$  standard deviation (continuous variables). Student t test was used when comparing two groups, while one-way ANOVA (f test) was used when comparing more than two groups. The difference is considered significance when  $p \leq 0.05$ .

### III. Results

Data collected in this study will be presented in the following main sections to answer the research questions:-

**Section I:** Represent socio-demographic characteristics and medical history of the studied patients.

1 Socio – demographic characteristics of the studied patients (Table 1).

2 Medical data of the studied patients (Table 2).

**Section II:** Represent Himilton Anxiety Scale pre and post-surgery.

1. Himilton Anxiety Scale pre and post-surgery (Table 3).

2. Comparison between patients' needs (physical, social, psychological and educational) before and after surgery (Table 4)

3. Comparison between total patients' needs before and after surgery (Table 5).

**Section III:** Represent relation between different variables of the study (Table 6-9).

1. Relation between socio-demographic data and total needs of patients before & after cataract surgery (Table 6).

2. Relation between past medical history and total needs of patients before & after cataract surgery (Table 7).

3. Relation between socio-demographic data and total Himilton anxiety scale before & after cataract surgery (Table 8).

4. Relation between past medical history and total Himilton anxiety scale before & after cataract surgery (Table 9).

**Section I:** Socio-demographic characteristics and medical history of the Studied Patients:-

**Table(1)** displays the distribution of the studied patients according to their socio-demographic characteristics. Regarding age, (81%) of the studied patients were age 50 and more., (1%) age between (20-30), and (18%) of the studied patients age was between (41-50) years. Regarding sex (56%) of the studied patients were females. In relation to marital status, (72%) were married. Concerning educational level, more than two thirds of studied patients were illiterate (66%). As regard to occupation, the majority of the studied patients didn't work (70%). It is observed from the table that the majority (84%) of the studied patients had never smoked.

**Table(2)** illustrates the distribution of the studied patients according to their past medical history. It is observed from the table that, (62%) of the studied patients had previous health problems ;out of them (41%) had heart disease and (26%) had diabetes. In relation to their present history; (31%) complained from white cloudy eye.

**Section II:** Represent Himilton Anxiety Scale pre and post-surgery

**Table (3)** shows that there is high statistical significance difference (0.043\*) between total Himilton anxiety scales symptoms pre and post-surgery.

**Table (4)** clarifies that there is high significance (<0.001) between all needs (physical, psychological social and educational) before and after surgery.

**Table (5)** shows that there is highly significance (<0.001) between needs before and after surgery. It shows that there is more need before than after surgery.

**Section III:** Represent relation between different variables of the study (Table 6-9).

**Table (6)** ,there was statistical significant association (p<0.05) between level of education and total needs of patients before cataract surgery. There was statistical significant association (p<0.05) between marital status and total needs of patients after cataract surgery. Also, there was statistical significant association (p<0.05) between smoking habit and total needs of patients after cataract surgery.

**Table (7)** illustrates that there was no statistical significant association (p<0.05) between past medical history and total needs of patients before cataract surgery. Also, there was statistical significant association (p<0.05) between past medical history and total needs of patients after cataract surgery.

**Table (8)** illustrates that there was no statistical significant association (p<0.05) between socio-demographic data and total Himilton anxiety scale before cataract surgery and that there was statistical significant association (p<0.05) between age data and total Himilton anxiety scale after cataract surgery.

**Table (9)**, there was statistical significant association (p<0.05) between past medical history and total Himilton anxiety scale after cataract surgery.

**Table (1):** Distribution of the studied patients according to their socio-demographic characteristics (n = 100).

Socio-demographic Characteristics	N	%
<u>Age</u>	1	1.0%
20-30	0	0.0%
31-40	18	18.0%
41-50	81	81.0%
>50		
Range	24-60	
Mean±SD	53.89±5.73	

<u>Sex</u>		
Male	44	44.0%
Female	56	56.0%
<u>Marital status</u>		
Single	9	9.0%
Married	72	72.0%
Widow	19	19.0%
<u>A level education</u>		
Illiterate	66	66.0%
Reads and writes	20	20.0%
Middle education	11	11.0%
High education	3	3.0%
<u>Employment Status</u>		
Work	30	30.0%
Not work	70	70.0%
<u>Smoking</u>		
Smoking	16	16.0%
Not smoking	84	84.0%

**Table (2):** Distribution of the studied patients according to their medical history.

Medical data of the studied patients	N	%
<u>Past history:</u>		
<u>History of chronic disease</u>		
Yes	62	62.0%
No	38	38.0%
<u>If yes:</u>		
Diabetes	26	26.0%
Heart disease	11	41.9%
Hypertension	17	17.7%
Respiratory system diseases	7	11.3%
Digestive system diseases	1	1.6%
<u>Present History:</u>		
<u>Present complain</u>		
Blurred eye	26	26.0%
Misty eyed	27	27.0%
White cloudy eye	31	31.0%
Eye floaters	16	16.0%

**Table (3):** Comparison between total pre and post-surgery anxiety scalesymptoms ( $n = 100$ ).

Total HAS	Pre		Post		Total	
	N	%	N	%	N	%
Mild	83	41.5%	70	35.0%	153	76.5%
Moderate	16	8.0%	24	12.0%	40	20.0%
Severe	1	0.5%	6	3.0%	7	3.5%
Total	100	50.0%	100	50.0%	200	100.0%
Chi-square	$X^2$		6.276			
	P-value		0.043*			

**Table (4):** Comparison between total needs (physical, psychological social and educational) before and after surgery ( $n = 100$ ).

	Before		After		Chi-square	
	N	%	N	%	$X^2$	P-value
<u>the physical needs</u>						
Don't need	77	77.0%	6	6.0%	103.820	<0.001*
Need	23	23.0%	94	94.0%		
<u>Psychological and spiritual needs</u>					122.581	<0.001*
Don't need	0	0.0%	76	76.0%		
Need	100	100.0%	24	24.0%		
<u>Social needs</u>					192.157	>0.05
Don't need	0	0.0%	98	98.0%		
Need	100	100.0%	2	2.0%		
<u>Educational needs</u>					43.250	<0.001*
Don't need	2	2.0	40	40.0%		
Need	98	98.0	60	60.0%		

Non sig. >0.05\*Sig. <0.05\*High sig. <0.001

**Table (5):** Comparison between needs before and after surgery ( $n = 100$ ).

Total needs	Before	After	Chi-square
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	N	%	N	%	X <sup>2</sup>	P-value
Don't need	3	3.0%	37	37.0%	36.125	<0.001*
Need	97	97.0%	63	63.0%		

**Table (6) :** Relation between socio-demographic data and total needs of patients before& after cataract surgery (n = 100).

	Total needs											
	Pre						Post					
	Don't need		Need		Chi-square		Don't need		Need		Chi-square	
	N	%	N	%	X <sup>2</sup>	P-value	N	%	N	%	X <sup>2</sup>	P-value
<u>Age</u>												
20-30	0	0.0	1	1.0	0.725	0.696	0	0.0	1	1.6	1.065	0.587
41-50	0	0.0	18	18.6			8	21.6	10	15.9		
>50	3	100.0	78	80.4			29	78.4	52	82.5		
<u>Sex</u>												
Male	1	33.3	43	44.3	0.143	0.706	17	45.9	27	42.9	0.090	0.764
Female	2	66.7	54	55.7			20	54.1	36	57.1		
<u>Marital status</u>												
Single	1	33.3	8	8.2	2.635	0.268	8	21.6	1	1.6	11.425	0.003*
Married	2	66.7	70	72.2			23	62.2	49	77.8		
Widow	0	0.0	19	19.6			6	16.2	13	20.6		
<u>A level education</u>												
Illiterate	2	66.7	64	66.0	10.445	0.015*	26	70.3	40	63.5	0.602	0.896
Reads and writes	0	0.0	20	20.6			6	16.2	14	22.2		
Middle education	0	0.0	11	11.3			4	10.8	7	11.1		
High education	1	33.3	2	2.1			1	2.7	2	3.2		
<u>Employment Status</u>												
Work	1	33.3	29	29.9	0.016	0.898	10	27.0	20	31.7	0.247	0.619
Not work	2	66.7	68	70.1			27	73.0	43	68.3		
<u>Smoking</u>												
Smoking	0	0.0	16	16.5	0.589	0.443	2	5.4	14	22.2	4.905	0.027*
Not smoking	3	100.0	81	83.5			35	94.6	49	77.8		

**Table (7) :** Relation between past medical history and total needs of patients before & after cataract surgery(n = 100) .

	Total needs											
	Pre						Post					
	Don't need		Need		Chi-square		Don't need		Need		Chi-square	
	N	%	N	%	X <sup>2</sup>	P-value	N	%	N	%	X <sup>2</sup>	P-value
<u>Past history</u>												
<u>History of chronic disease</u>												
Yes	1	33.3	61	62.9	1.079	0.299	22	59.5	40	63.5	0.161	0.688
No	2	66.7	36	37.1			15	40.5	23	36.5		
<u>If yes</u>												
Diabetes	1	100.0	25	41.0	1.407	0.843	10	45.5	16	40.0	4.044	0.400
Heart disease	0	0.0	11	18.0			5	22.7	6	15.0		
Hypertension	0	0.0	17	27.9			5	22.7	12	30.0		
Respiratory system diseases	0	0.0	7	11.5			1	4.5	6	15.0		
Digestivesystem diseases	0	0.0	1	1.6			1	4.5	0	0.0		
<u>present history</u>												
<u>present complain</u>												
Blurred eye	2	66.7	24	24.7	3.303	0.347	14	37.8	12	19.0	15.025	0.002*
Misty eyed	0	0.0	27	27.8			6	16.2	21	33.3		
White cloudy eye	1	33.3	30	30.9			16	43.2	15	23.8		
Eye floaters	0	0.0	16	16.5			1	2.7	15	23.8		

	Total Hamilton anxiety scale															
	Pre							Post								
	Mild		Moderate		Severe		Chi-square		Mild		Moderate		Severe		Chi-square	
	N	%	N	%	N	%	X <sup>2</sup>	P-value	N	%	N	%	N	%	X <sup>2</sup>	P-value
<b>Age</b>																
20-30	0	0.0	1	6.3	0	0.0	5.560	0.235	0	0.0	0	0.0	1	16.7	21.223	<0.001*
41-50	15	18.1	3	18.8	0	0.0			10	14.3	8	33.3	0	0.0		
>50	68	81.9	12	75.0	1	100.0			60	85.7	16	66.7	5	83.3		
<b>Sex</b>																
Male	39	47.0	5	31.3	0	0.0	2.142	0.343	32	45.7	11	45.8	1	16.7	1.935	0.380
Female	44	53.0	11	68.8	1	100.0			38	54.3	13	54.2	5	83.3		
<b>Marital status</b>																
Single	9	10.8	0	0.0	0	0.0	2.513	0.642	9	12.9	0	0.0	0	0.0	6.130	0.190
Married	59	71.1	12	75.0	1	100.0			47	67.1	19	79.2	6	100.0		
Widow	15	18.1	4	25.0	0	0.0			14	20.0	5	20.8	0	0.0		
<b>A level education</b>																
Illiterate	56	67.5	10	62.5	0	0.0	6.472	0.372	48	68.6	14	58.3	4	66.7	2.615	0.855
Reads and writes	14	16.9	5	31.3	1	100.0			13	18.6	5	20.8	2	33.3		
Middle education	10	12.0	1	6.3	0	0.0			7	10.0	4	16.7	0	0.0		
High education	3	3.6	0	0.0	0	0.0			2	2.9	1	4.2	0	0.0		
<b>Employment Status</b>																
Work	28	33.7	2	12.5	0	0.0	3.901	0.142	19	27.1	11	45.8	0	0.0	5.709	0.058
Not work	55	66.3	14	87.5	1	100.0			51	72.9	13	54.2	6	100.0		
<b>Smoking</b>																
Smoking	16	19.3	0	0.0	0	0.0	3.901	0.142	13	18.6	3	12.5	0	0.0	1.706	0.426
Not smoking	67	80.7	16	100.0	1	100.0			57	81.4	21	87.5	6	100.0		

**Table (9):** Relation between past medical history and total Hamilton anxiety scale before & after cataract surgery (n = 100).

	Total anix															
	Pre							Post								
	Mild		Moderate		Severe		Chi-square		Mild		Moderate		Severe		Chi-square	
	N	%	N	%	N	%	X <sup>2</sup>	P-value	N	%	N	%	N	%	X <sup>2</sup>	P-value
<b>Past history</b>																
<b>History of chronic disease</b>																
Yes	50	60.2	12	75.0	0	0.0	2.888	0.236	43	61.4	16	66.7	3	50.0	0.598	0.741
No	33	39.8	4	25.0	1	100.0			27	38.6	8	33.3	3	50.0		
<b>If yes</b>																
Diabetes	19	38.0	7	58.3	0	0.0	3.943	0.414	17	39.5	9	56.3	0	0.0	18.115	0.020*
Heart disease	8	16.0	3	25.0	0	0.0			8	18.6	0	0.0	3	100.0		
Hypertension	15	30.0	2	16.7	0	0.0			12	27.9	5	31.3	0	0.0		
Respiratory system diseases	7	14.0	0	0.0	0	0.0			5	11.6	2	12.5	0	0.0		
Digestive system diseases	1	2.0	0	0.0	0	0.0			1	2.3	0	0.0	0	0.0		
<b>Present history</b>																
<b>Present complain</b>																
Blurred eye	22	26.5	4	25.0	0	0.0	6.102	0.412	17	24.3	7	29.2	2	33.3	3.625	0.727
Misty eyed	23	27.7	3	18.8	1	100.0			19	27.1	5	20.8	3	50.0		
White cloudy eye	27	32.5	4	25.0	0	0.0			23	32.9	7	29.2	1	16.7		
Eye floaters	11	13.3	5	31.3	0	0.0			11	15.7	5	20.8	0	0.0		

#### IV. Discussion

Cataract, defined as loss of optical uniformity of the crystalline lens, develops gradually extending from minimal changes of original transparency of the lens to total opacity (WHO, 2013), leading to impairment of patient's visual acuity to mere distinction between light and dark (Casparis, 2012). Cataract surgery is usually recommended (Miller, 2009). The cure for cataract is surgery to remove the natural lens and replace it with a new, artificial one. It is one of the safest and most successful procedures performed, but this is not equally available to all, and the surgery which is available does not produce equal outcomes. Readily available surgical services capable of delivering good vision rehabilitation must be acceptable and accessible to all in need, no matter what their circumstances (Trent & Albright 2014).

##### 4.1 Socio-demographic characteristics and medical history of the studied patients.

In relation to age, the present study represented that patients' ages were 50 and more years. This might

be due to the effect of cataract on old age as a result of chronic diseases. This result is in agreement with Havale, Moitra, Saxena(2016)& El-Nasser, Mohamed(2013) who found the same result .

On the other hand, this result is in disagreement with Hegazy (2012) &Taha (2015) who presented that the studied patients' age ranged between 33 and 73 years. In addition to; Olawoye, Ashaye1, Bekibele1 and Ajayi (2011) who found that the mean age of the studied patients was 66.5 years. These differences may be due to the difference criteria of the studied sample.

In reference to gender, the results of the present study indicated that more than half of the studied patients were female. This may be due to noncompliance of females with follow up. This result is in consistency with Gimbel&Dardzhikova, (2011) who found that the same result in which cataract surgical coverage higher for females than for males. Also, AbdSa'adoon, Hussien And Museher (2008) Which Reported that, more than half of the patients' were women. Sex-specific cataract was higher in women than in men according to Abraham, Condon & West Gower (2006). These findings come in disagreement with Hegazy (2012)&Belal, (2004) who showed that the studied patients were two thirds of males. As well;Taha, (2015),Olawoye, Ashaye1, Bekibele1 and Ajayi (2011) who found studied patients were more than half of males. In addition to, Theodoropoulou et al;(2011) who found only borderline significance of female sex to the risk of cataract.

Regarding marital status, the present study showed that nearly three quarters of patients were married and a few of them were single. This may be due to more than half of them were females who are married at this age as the Egyptian culture. This result is in agreement with Taha,(2015)& El-Nasser, Mohamed (2013) who found that the most of the studied patients were married. In contrast this result come in disagreement with Hegazy (2012) who presented that about half of the studied sample were single and that may be due to most of her study group were men. In reference to occupation, the present study results concluded that nearly three quarters of the studied patients weren't working which may be due to more than half of them were female. These findings are in agreement with Taha (2015) who reported that three quarters of the studied group were unemployed and El-Nasser, Mohamed (2013) who reported that majority studied group was unemployed. This findings disagree with Olawoye, Ashaye1, Bekibele1 and Ajayi (2011)&Belal, (2004) who demonstrated that the studied patients were working different jobs. These differences may be due to the difference criteria and the setting of the studied sample.

As regards to educational level, the findings of the present study represented that, more than two thirds of patients were illiterate, and the lowest number were highly educated. This may be due to nearly three quarters of them weren't working. These finding is in agreement with (Havale, Moitra, Saxena2016)&Taha, (2015). Also,(Maqsood, Oweis, And Hasna 2012) who found more than half of patients' were illiterate. In contrast, it disagrees with Hegazy (2012)&Belal (2004) who represented that highly educated are more likely to have cataract surgery.

Regarding to smoking, the present study represented that the majority of patients weren't smoking that may be due to more than half of patients were female. This result agrees with Taha, (2015) who found that one fifth of the study group were smoking. This finding is also in agreement with Hegazy, (2012)&Belal, (2004) who found that more than half of study group weren't smoking.

On the other hand, the present result is in disagreement with Solberg, Rosner& Belkin, (2016) who found that both cataract development and age-related macular degeneration, the leading causes of severe visual impairment and blindness, are directly accelerated by smoking and significantly linked to this harmful habit. In reference to medical history, the present study indicated that two thirds of patients had past medical history that may be due to sample ages include old age and more than half of them were female. This result is in agreement with ( Olawoye, Ashaye1, Bekibele1 and Ajayi,2011) who found the same result. In relation present medical history, the present study showed that one third of the study group had eye complains. This is in consistent with Belal, (2004) who reported the same result.

#### **4.2 Physical, social, psychological and educational needs of patients before surgery.**

Concerning physical needs, it is clear that significant difference was found between pre / post surgery. The previous findings were supported by Keenan et al. (2007) who stressed on the importance of physical preparation for patients with cataract surgery. Also, add that surgery provide a major effective form of care with a high quality of services. For physical needs also food regimen instructions, Black et al. (2009) emphasized that, adequate diet and good nutrition are important to the conservation of sight. In relation to activities of daily living as a physical need in this study, Gogate et al.(2007) and Campbell et al. (2009) recommended that, the nurse must assess patients' ability to perform activities of daily living to determine level of independence in self-care and health education, added to majority of patients were in needs for helping in activities of daily living. Furthermore, medications and eye care considered as a physical need, Marsden (2004) claimed that, medications and eye care instructions are very important to decrease post-operative complications.

On the other hand, the present finding was in agreement with Mahrous(2003), potter and Perry (2001) who showed that assisting patients to meet their needs is a fundamental and vital part of nursing care. It



contributes greatly to comfort and provide a chance to build a trusting relationship, which is the heart of good nursing. Regarding psychological needs, the present study showed that there was a significant difference pre / post surgery in which three quarters of the patients' needs were: answers their queries, receive information about the changes after surgery and about effect of psychological factors on the surgery. This finding could be due to fearing of the surgery and the further complications. This finding in agreement with Lansingh and Carter (2009) who listed that, psychological preparation play a vital role in the successful outcome of the surgery and psychological assessment should be made to assist in alleviating any worries the patients may have.

As regards social needs, there was a insignificant difference pre / post surgery, as the majority of the patients in this study reported positive relation with health care team. This finding in agreement with Hegazy (2012), Sach et al. (2010) who recognized that building up relationships with patients will allow discussing the problems confidentially. So it is essential to use an efficient interaction with patients stayed for a short period in the hospital. Considering educational needs, patients had a higher need after the surgery, and there was a significant difference pre / post surgery. These findings may be due to lack of instructions that must be given to them by the health team. This result is in agreement with Fedorowicz et al. (2006) who reported that, in surgery, therefore post discharge advise, as well as, teaching patients and the families dispelling misconceptions and provide with the factual information.

In addition, patients should be informed that the most common problems following Local anesthesia post cataract surgery are eye redness and temporary double vision. Lewis, et al (2011) mentioned that, instructions about medications are very important to decrease post-operative inflammatory response.

In contrast, it disagrees with Hegazy (2012) & Belal et al. (2004) who presented that patients had a higher need before the surgery. Instructions about: Local anesthesia, permissible activities, sleep, food, unusual signs and symptoms, eye irrigation, medications and eye care, ADL and infection control. According to Hickman *et al.* (2010) patients should be informed that at 4 weeks the following complaints should be absent: pain, photophobia, redness (except remaining sub – conjunctival hemorrhage) and cells in the anterior chamber. All mobility permissive patients should be taught to take extreme care of the eyes at home. Also, (Alrubaiee & Alkaa'ida 2011) who reported that, the preoperative patient education has been used by many institutions to deal with patient anxiety and pain control.

In the same line, postoperative examination are crucial, so it is customary that the patients be seen the next day, however writing detailed note about what is normal and what complications on the first day is unacceptable. In addition, the patients should be educated about the risks and benefits of cataract surgery and alternatives to the treatment. Moreover, determine if the expected improvement of the disability outweighs the potential risk, cost and inconvenience of the surgery (Rengarajet al., 2012).

#### **4.3 Himilton Anxiety Scale pre and post-surgery.**

When comparing between anxiety level pre and post surgery, the present study presented that the anxiety is increased post than pre surgery and there was a significant difference pre / post surgery. This result may be due to lack of psychological preparation and other cases had surgical complications. This result is consistent with Hegazy (2012) & Timby & Smith (2008) who listed that majority of the nurses perform psychological preparation incorrectly and stressed on the value of the preoperative preparations in reducing anxiety. He also adds that, anxiety results when patients are unable fully to comprehend the world around as regards the surgery. On the other hand this result comes in disagreement with Nijkamp et al., (2004) who found that The level of anxiety was the highest before surgery, decreased immediately after surgery, and increased again after the postoperative visit.

#### **4.4 Relation between socio-demographic data & past medical history and total needs of patients before & after cataract surgery.**

Regarding relation between socio-demographic data and total needs of patients before & after cataract surgery. Regarding patients' education There was statistical significant difference between level of education and total needs of patients before cataract surgery in which the results revealed that needs of illiterate patients were higher. This finding could be explained as level of education effect on their understanding and interest to get informations, so the illiterate patients needs more effort to obtain informations. Mahrous, (2003) reported that patients with level of health and can manage their health problems more correct than non educated. On the other hand, Al-Emad, Falamarzi, Al-Kuwari ., et al. (2009) revealed that there was no statistical significant differences between the level of education and previous surgery and total needs of patients .

In relation to marital status, There was statistical significant difference between marital status and total needs of patients after cataract surgery. This finding may be due to increase responsibility after marriage and that make them need help and increase their demands. This result is in agreement with **Shams Mohamed**, and Ahmed (2010).

In relation to smoking, There was statistical significant difference between smoking and total needs of patients after cataract surgery. This result may be due to the bad effect of smoking on the body and that increase their need. This finding was supported by Beebe, Holekamp & Shui (2010) who revealed that current

smoking, lead to increased risk of cataract.

Regarding to gender and job, there wasn't significant difference between job, gender and patients' needs. The present finding is in disagreement with Belal (2004) who showed that there was significant difference between patients' need, gender and job. This difference may be due to the difference criteria of the studied sample.

Meanwhile, patients' age and job status turned to be negative predictors of the score of patients' needs achievement according to Taha (2015). This means that the older patients and those having work had less achievement of their need. The finding could be attributed to that older age patients' needs may be more than those of younger ones since they may suffer other health problems that need attention. As for the working patients, they might be more exigent in their needs given the importance of rapid cure to return to work. In line with this, Elsabagh (2012) in a study at Ain-Shams University Hospitals revealed a significant relation between the age and needs of the studied patient before and after cataract surgery. Also, Nirmalan et al (2005) in a study in Rural India shows a significant association between patients' visual problems and their job status.

Regarding to past medical history and total needs of patients before & after cataract surgery. It was found that there was statistical significant difference between past medical history and total needs of patients after cataract surgery. This can be explained as patients with choric disease taking drugs and they need more help in organizing this drug as more than two thirds of them were illiterate. This finding is in agreement with Fattore & Torbica (2008) who showed that past medical history as (cardiovascular disease, diabetes asthma and chronic bronchitis) increased risk of cataract.

#### **4.5 Relation between socio-demographic data & past medical history and total Himilton anxiety scale before & after cataract surgery.**

Regarding relation between socio-demographic data and total Himilton anxiety scale before & after cataract surgery. In relation to age, there was statistical significant difference between age and total Himilton anxiety scale. This finding may be due to the present study represented that patients' ages were 50 and more years and the anxiety increases with age. This finding is in agreement with Rose, Waterman, Toon, McLeod, & Tullow (2005) who found the same result. Bennetts, Rollins (2006) and Clark K, Voase, Cato, Fletcher, Thomson (2000) reported less anxiety after cataract surgery.

Regarding to past medical history, there was statistical significant difference between past medical history and total Himilton anxiety scale, this may be as a result of fearing of recurrent the illness experience. This finding is in agreement with Jjala, Caljouw, Bedford, et al., (2010).

### **V. Conclusion**

#### **5.1 From the results of the present study, it can be conducted that:**

The study concluded that the health needs among patients undergoing cataract surgery were physical, social, physiological, spiritual and educational needs. Mostly of the studied sample needed educational needs about the cataract surgery, while three quarters of them had physical needs with highly statistically significance differences with  $p < 0.001$  between needs before and after surgery.

Also concluded that there was statistical significant association between socio-demographic data and total needs of patients before cataract surgery while there was no statistical significant association ( $p < 0.05$ ) between socio-demographic data and total Himilton anxiety scale before cataract surgery.

### **VI. Recommendation**

#### **Based On The Findings Of The Present Study, The Following Recommendations Were Suggested:**

1. Development of an educational program for patients' with cataract about the essential needs for the patients undergoing cataract surgery to improve patients' knowledge and decrease the possible complication.
2. A comprehensive treatment plan about patients' discharge and the importance of follow – up at the outpatient clinic.
3. Applying standard guidelines for surgical and non-surgical management of cataract in diagnosing and caring for a patient with a cataract is to improve functional vision and quality of life.

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