

Employees Knowledge about Glaucoma at Assiut University Employees

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Abstract

Glaucoma is a leading cause of blindness worldwide. **The study aimed to:** assess employees' knowledge regarding glaucoma. **Methods:** Descriptive research design carried out in Assiut University. It included 1000 employees aged forty year and more. **Tools:** Data collected by using three tools; tool (1): included demographic characteristics, second tool included assessment of ophthalmic, medical and family history of the employees, while the third tool included assessment of knowledge regarding the glaucoma. **The main results of present study** were: it was found that more than 21.1% of employees were suffering from different types of eye diseases. (94.5%) of the employees had unsatisfactory knowledge regarding to glaucoma, there was a statistical significant difference between employees' level of knowledge and their education. **It concluded that:** The employees had unsatisfactory knowledge about glaucoma. **It was recommended that:** health education programs should be implemented for employees with chronic disease every year.

Key words: *Assessment, Employees, Knowledge, Glaucoma & Assiut University.*

Introduction

Glaucoma is a major cause of blindness worldwide and an increasingly significant global health problem. It is a group of disorders that shares a distinct type of optic nerve damage that leads to loss of visual function. The disease is manifested as a progressive optic neuropathy that, if left untreated, leads to blindness (**Sommer & Doyne 2006 & National Eye Institute, 2011**). The World Health Organization (WHO) reported in 2002 that glaucoma accounted for approximately 4.6 million cases, or 12.3%, of the 37 million cases of blindness worldwide, making it the second most common cause of blindness after cataract (**Quigley & Browman, 2006**). According to the Egyptian Society for glaucoma disease. Incidence of glaucoma in Egypt about 0.5% to 1% of the total population. In Egypt, more than half a million children and adolescents are estimated to be affected by glaucoma (**Egyptian Society for glaucoma disease, 2011**). It can be divided into two main categories, "open-angle" and "closed-angle" (or "angle closure") glaucoma. Closed-angle glaucoma can appear suddenly and is often painful; visual loss can progress quickly, but the discomfort often leads patients to seek medical attention before permanent damage occurs. Open-angle, chronic glaucoma tends to progress at a slower rate and patients may not notice they have lost vision until the disease has progressed significantly (**Sharif, et al., 2007**).

Risk factor of glaucoma as Increased Intraocular Pressure (IOP), Age The risk of developing glaucoma increases with age. Family History and People with certain medical or physical conditions, including diabetes, high blood pressure, migraine, and sleep apnea. Conditions that require the use of any oral or inhaled steroid, particularly high doses for prolonged periods of time, can cause glaucoma and previous eye surgery (**Glaucoma Research Foundation, 2011**). Glaucoma can be diagnosed through Visual acuity of eyes, visual field and dilated eye examination results. Community health Nurses who are functioning within primary care settings can provide valuable early detection screening to high-risk clients and make timely referrals for further evaluation (**Mohamed et al., 2011 and Pardianto, 2006**).

Significance of the study

Most of the patients present late for medical attention when the eye condition is already advanced which may be due to lack of knowledge about glaucoma and because most cases are asymptomatic, many affected individuals are unaware that they have the disease leading to avoidable blindness. Glaucoma education' is an important issue to the patient (**Onunkwor, & Monareng, 2012**). Very limited studies were conducted about glaucoma, so there is a need for

glaucoma education to detect early cases and prevent complication.

Materials and Methods

Study design

Descriptive research design was used in this study.

Study settings

The study had been carried out in Assiut University campus targeting the employees aged 40 years and above. The study plan divided the study settings into 4 sectors as follow: practical & theoretical faculties, administrative & service sectors,

Sample

Type of sample: Cluster sample was used in this study.

Study subjects

All Assiut University employees who aged 40 years and above (9,420 persons) were eligible to be study employees; they composed what is known as sample frame of the study. Through applying the cluster sampling technique the researcher recruited 1000 eligible study employees from different sectors of Assiut University (50 cluster x 20 individuals).

Tools of the study

Interviewing questionnaire was developed by the researcher for the data collection. It was based on review of relevant literatures this questionnaire composed of three tools as follow:

Tool (I): Demographic characteristics of study employees

It included the socio demographic characteristics such as name, age, sex, marital status, level of educationetc.

Tool (2): previous history of study employees

This part used to assess the previous the ophthalmic, medical and family history of the study employees.

Tool (3): Knowledge of employees about glaucoma

This part used to assess and evaluate knowledge of the studied sample. Total score of knowledge were (33). Using score system for knowledge, a correct response was scored (1) grade and zero for the incorrect (Unsatisfactory = score < 50%, satisfactory score \geq 50%).

Study phases

I- Administrative phase

The researcher had obtained an official approval letter from the Faculty of Nursing to be submitted to the authorized persons at the study sites in Assiut University in order to facilitate the carry out of this study.

II- Pilot study

Pilot study was carried out before starting data collection on (20) employees, which was excluded from the sample. The aim of pilot study was to test

the clarity of the tool and to estimate the time required to fill the questionnaire.

III- Ethical considerations

The researcher explained the purpose and nature of the study for each employee. The employee has the right to agree or disagree to participate in the study ; consent to participate in the study was secured orally from every employee and informed that the obtained information will be confidential and will be used only for the purpose of the study.

IV- Data collection phase

Field work

The researcher started to collect data from first of November 2012, until the end of November 2013. The researcher met the employee's in University. The form was filled by researcher from every interviewed employee's. The data was collected on average one or two day / week with the average number of 15-20 employee / day. The approximate time spent for completing the sheet was around 15-20 minutes.

Results

Table (1): Socio demographic characteristics of the study employees, Assiut University, 2013.

Variables	No. (n= 1000)	%
Sex		
Male	637	63.7
Female	363	36.3
Age		
< 45 years	297	29.7
45 - < 50 years	279	27.9
50 - < 55 years	218	21.8
≥ 55 years	206	20.6
Mean ± SD (Range)	48.62 ± 5.72 (32 – 60)	
Marital status		
Single	23	2.3
Married	943	94.3
Widowed	29	2.9
Divorced	5	.5
Level of education		
Basic education or less	212	21.2
Secondary education	459	45.9
University or higher	329	32.9
Residence		
Rural	263	26.3
Urban	737	73.7

Table (2): Study employees with history of eye diseases, at Assiut University, 2013.

Variables	No. (n= 1000)	%
History of eye diseases		
Yes	211	21.1
No	789	78.9
Types of eye diseases: ≠ (n=211)		
Supportive conjunctivitis	6	2.8
Keratitis	132	62.6
Chalazion	21	10.0
Retina detachment	5	2.4
Optic nerve atrophy	2	0.9
Myopia	22	10.4
Cataract	23	10.9
History of eye operations		
Yes	36	3.6
No	964	96.4
Type of operation: ≠ (n=36)		
Lasik	3	8.3
Cataract extraction with Intraocular lenses implantation	16	44.4
Squint correction	2	5.6
Remove foreign body	2	5.6
Remove Chalazion	5	13.9
Remove pterygium	1	2.8
Retina detachment surgery	5	13.9
Keratoplasty	2	5.6

≠ (n=211)

≠ (n=36)

Table (3): Distribution of employees regarding history of chronic disease, medical problems and Take drug contain corticosteroid, Assiut University, 2013.

Items	No. (n= 1000)	%
History of chronic disease		
Yes	282	28.2
No	718	71.8
Type of chronic disease: ≠		
Diabetes	157	55.7
Hypertension	179	63.5
Heart disease	29	10.3
Kidney disease	7	2.5
Medical problems: ≠		
Migraine	105	10.5
Sense of Cold extremities	64	6.4
None	847	84.7
Taking corticosteroid drugs		
Yes	44	4.4
No	956	95.6

≠ More than answer

Table (4): Employees' knowledge about definition, types, symptoms and risk factors of glaucoma, Assiut University, 2013.

Variables	No. (n= 1000)	%
Definition of glaucoma		
correct	80	8.0
incorrect	920	92.0
Types of glaucoma		
Chronic glaucoma	16	1.6
Acute glaucoma	5	0.5
Congenital glaucoma	2	0.2
Secondary glaucoma	2	0.2
Don't know	981	98.1
Signs & Symptoms of glaucoma: ≠		
Does not have any symptoms	10	1.0
Severe eye pain	33	3.3
Redness of the eye	37	3.7
Vision disorders	219	21.9
Migraine	77	7.7
Don't know	704	70.4
Risk factors of glaucoma		
People aged 40 years and above	148	14.8
people have relatives suffering from glaucoma	14	1.4
Diabetes mellitus	75	7.5
Patients' suffering from certain eye diseases like (inflammation iris or cornea and myopia)	3	0.3
Don't know	773	77.3

≠More than answer

Table (5): Employees' knowledge about some issues related to glaucoma, Assiut University, 2013.

Glaucoma's issues	(n= 1000)	%
Complications of glaucoma		
Loss of vision	388	38.8
Severe eye pain	16	1.6
Don't know	596	59.6
Diagnostic tests for glaucoma		
Measuring eye pressure	263	26.3
Endoscope	4	0.4
Measuring of vision	8	0.8
Don't know	725	72.5
Recovery of glaucoma		
correct	691	69.1
incorrect	309	30.9
Duration of treatment		
Treatment of glaucoma is life long	23	2.3
More than one year	20	2.0
More than one month	9	0.9
Don't know	948	94.8
Methods of treatment: ≠		
Eye drops	46	4.6
Eye surgery	363	36.3
Laser treatments	20	2.0
Don't know	582	58.2

≠More than answer

Table (6): Employees knowledge about preventive methods of glaucoma, Assiut University, 2013.

Variables	No. (n= 1000)	%
Glaucoma can be prevented		
correct	46	4.6
incorrect	954	95.4
Methods of prevention: ≠		
Periodic examination after the age of forty years	43	93.5
Exercise such as walking	5	10.9
Eat foods rich in vitamin A; such as carrots	6	13.0
Avoid drinks rich in caffeine, such as coffee	3	6.5

≠More than one answer

Figure (1): Distribution of employees' knowledge about glaucoma, Assiut University, 2013.

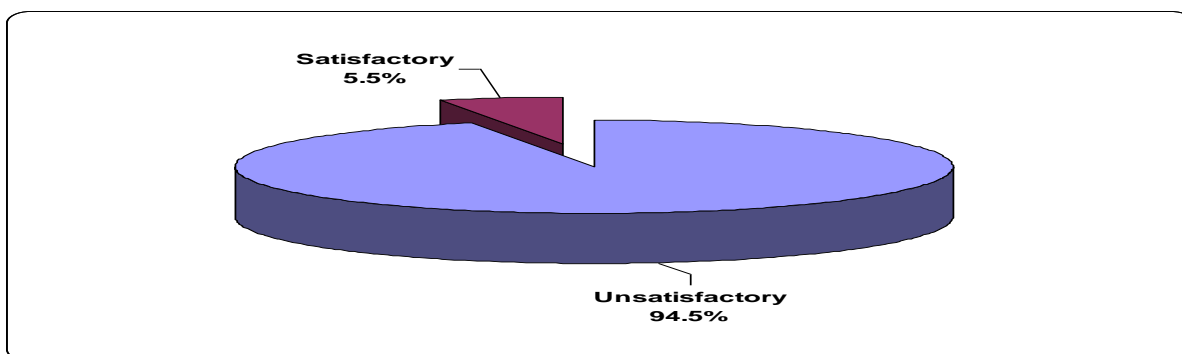


Table (1): This table shows socio demographic characteristics of the studied employees, it was noticed that more than three fifths (63.7%) of the studied sample were male while more than one third (36.3%) were female. As regard to age, more than one quarter (29.7%) of the studied sample were less than 45 years while slight more than fifth (20.6%) of studied sample were 55 years and more. As regard to employees education this study findings revealed that more than fifth (21.2%) of the studied sample were basic education or less while more than one quarter (32.9%) of them had university education. In relation to employees residence, it was observed that more than two thirds (73.7%) of the studied employees were from urban area.

Table (2): This table shows that distribution of the studied sample regarding history of eye disease it was noticed that more than fifth (21.1%) had a history of eye problem while 78.9% had no eye problem. As regarding to types of eye disease among employees, the findings revealed that more than three fifths (62.6%) had keratitis, followed by myopia 10.4%, chalazion 10.0% and cataract 8.5%. Concerning the history of eye operation it was noticed that 3.6% had past history of eye operation, 44.4% of these operations was cataract extraction with Intraocular lenses implantation.

Table (3): This table revealed that more than one quarter (28.2%) of the studied employees had chronic diseases. As regards to type of chronic diseases, more than three fifths (63.5%) had hypertension and more than half (55.7%) had diabetes mellitus. Also this table illustrated that only 10.5% of the studied employees had migraine and 4.4% had a history of taken drug contain corticosteroid.

Table (4): This table revealed that knowledge about definition; types, signs and symptoms as well as risk factors of glaucoma 8.0% of the studied sample know glaucoma. As regard to types of glaucoma, the vast majority (98.1%) of the studied sample don't know types of glaucoma. Also this table illustrated that more than one fifths (21.9%) of the studied sample stated that vision disorders was a symptoms of glaucoma. More over 14.8% of the studied sample mentioned that people who are at age of 40 years and more consider as a risk factor of glaucoma.

Table (5): This table illustrated that employees knowledge about complications of glaucoma more than one third (38.8%) of the studied sample stated that correct answer. The study findings revealed that nearly three quarter (72.5%) don't know the diagnostic tests of glaucoma. Also this table revealed that more than two third (69.1%) of the employees know that glaucoma can be recovered. Regarding to methods of glaucoma treatment, the results revealed that more than one third (36.3%) of the studied

sample mentioned that eye surgery is the most common method of treatment for glaucoma.

Table (6): This table revealed that only (4.6%) of the studied sample mentioned that glaucoma can be prevented. As regards to methods of prevention, the vast majority (93.5%) of them stated that through periodic examination after the age of forty.

Figure (1): This figure revealed that the vast majority (94.5%) of the employees' had unsatisfactory knowledge about glaucoma while only 5.5% of the employees' had satisfactory knowledge about it.

Discussion

Glaucoma is a term used to describe several types of eye conditions that result in optic nerve damage. In many cases, damage to the optic nerve is caused by abnormally increased pressure in the eye, a condition known as high intraocular pressure (IOP) or ocular hypertension (Cook 2009).

Concerning the age group of the studied sample it was found that more than one quarter (29.7%) of the studied sample were less than 45 years while slight more than fifth (20.6%) of studied sample were 55 years and more.

In the current study it was observed that the vast majority of employees' had poor knowledge about glaucoma while only (5.5%) of employees' had satisfactory knowledge about it. These results agreed with (Onunkwor & Monareng, 2012) who implemented a study to assess patients' knowledge about glaucoma in Abuja, Nigeria only, and found that 14.5% of the respondents had knowledge of glaucoma while the majority of respondents (85.5%) had very little or no knowledge of glaucoma.

According to family history of study employees, it was noticed that only (9.5%) of the studied sample had family history of glaucoma while the majority (90.5%) of the Employees had no family history of glaucoma. Also there was highly significant relation between employees' knowledge and their family history of glaucoma. It might explained by family history of glaucoma. The current study similar to (Saw et al., 2003) Awareness of glaucoma, and health beliefs of patients suffering primary acute angle closure 78.4% of patients had no family history while 33.3% of patients had family history.

According to risk factor of glaucoma, only of studied sample mentioned that people who are at age of 40 years and more consider at.(Grehn & Stamper, 2009) The Epidemiology of glaucoma, it was reported that increasing age is a risk factor for the development of glaucoma.

Conclusion

The employees had unsatisfactory knowledge about glaucoma.

Recommendations

Educational programs and training should be implemented for of medical and nursing staff about glaucoma and their complications. Health education programs should be implemented for employees with chronic disease every year.

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