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Research Paper

A Study to Assess the Effectiveness of Compliance Assessment Tool for Patient with Glaucoma in a Selected Hospital, Puducherry

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ABSTRACT:
Introduction: Glaucoma is among the most common causes of irreversible vision loss worldwide. While its primary etiology remains incompletely understood, we have developed a robust understanding of the risk factors that contribute to the development and progression of the disease. Objectives of the study: The main objective of the study to assess the effectiveness of compliance assessment tool for patient with glaucoma. Methodology: The research approach used for this study was quantitative research approach. A descriptive Research design was adopted for this present study. By using convenient sampling technique, 30 patients with glaucoma were selected for the present study. Results: The present study reveals that Out of 30 samples, 14(47%) of them have Moderate knowledge, 16(53%) of them have low level of knowledge. Conclusion: The study findings concluded that that the effectiveness of compliance assessment is high there was a significant association found between the compliance assessment tools for patient with glaucoma.

Keywords: *Glaucoma, vision loss, Compliance*

I. INTRODUCTION:

Glaucoma is a common cause of irreversible vision loss worldwide, with intraocular pressure (IOP) being the most important risk factor. Vascular factors have also been suspected to play a role in the glaucomatous process. Ocular perfusion pressure (OPP), the difference between IOP and systemic blood pressure (BP), as well as other factors such as BP, vasospasm, and ischemia, may all contribute to glaucoma risk.

Health is defined as a state of complete physical, mental, and social well-being, not just the absence of a disease. The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being, which can be assessed by measuring improvement in the quality of life related to healthcare. Visual impairment due to ophthalmological diseases has a negative impact on physical and mental health and is a global concern. In the USA, visual disability ranks among the top ten disabilities, and visually impaired people are at higher risk for accidents, social withdrawal, and depression.

The number of patients with visual impairment and irreversible blindness from glaucoma is rapidly increasing, particularly in low- and middle-income countries (LMICs) with limited eye care infrastructure. The WHO estimated that in 2020, 6.9 million people lived with moderate to severe visual impairment or blindness from glaucoma, but the actual number of people experiencing diagnosed or undiagnosed glaucoma could be as high as 76 million. Projections published by Them et al. in 2014 suggested that by 2040, the number of people with glaucoma worldwide would increase to nearly 112 million.

Glaucoma diagnosis includes multiple tests ranging from simple eye examinations and measurements of visual acuity (VA) and IOP to more complex assessments of anterior chamber (AC) angle structures, fundus and optic nerve examination, and visual field charting to look for characteristic glaucomatous changes. However, these tests are very challenging in low-resource settings, as the number of facilities with glaucoma-trained staff and equipment is limited and patient demand for services is low due to lack of education and awareness.

Our group developed the Glau computerized adaptive testing, a system that measures multiple domains of glaucoma-specific using the open-source Concerto Platform. We evaluated the implementation of Glau computerized adaptive testing in outpatient clinics at a tertiary eye care setting in the United States, aiming to minimize impact on patient flow and provide real-time results in an accessible format for physicians to use in their clinic consultations.

NEED FOR THE STUDY

In India, studies published during 2000–2020 estimated the prevalence of glaucoma at 2.3% to 4.7% with variations by location and population subgroups. Studies also noted that >90% of glaucoma patients were unaware of their condition at the time of the diagnosis Global estimates suggest that India accounts for around 13% of all glaucoma cases in the world. Although India's 12th Five-Year Plan of the National Programme for Control of Blindness and Visual Impairment recognises glaucoma as a priority disease, it suffers from a lack of clear objectives, strategies and actions. Facility-based studies show that the majority of glaucoma patients are diagnosed at an advanced stage and that there are challenges in both detecting and treating the disease.

In a recent review of the glaucoma situation in India, Senjam argued that in resource- limited settings like India, mass community screenings or glaucoma case finding was not feasible. The author suggested that targeted opportunistic screening programmes that operated at different levels of the system would be more appropriate. The growing burden of glaucoma and the significant numbers of patients presenting with irreversible vision loss calls for developing and implementing effective, accessible and inexpensive glaucoma care pathways appropriate for India and other LMICs. In 2019, the WHO South-East Asia Office conducted a workshop with the aim of developing guidelines for the effective screening and management of glaucoma in the region.

In this paper, we present the results of a pilot programme, which integrated targeted glaucoma screening in community-based eye care services in the Ganjam district of Odisha state, India. We used routine programme data to explore the enrolment and characteristics of patients participating in the screening programme, the rate and uptake of glaucoma referrals and the prevalence and distribution of different types of glaucoma among those who were routinely screened.

The purpose of this quantitative study was to examine the effect of education about glaucoma through a patient navigator on patient knowledge of glaucoma and 7 patient adherence to follow-up care. The process entailed examining a randomly split convenience sample of 206 participants into two equal groups to compare whether additional education in one group produced an effect on glaucoma knowledge, adherence to ocular medication use, and followup appointment attendance.

Group 1 was a control group that received a standard exam; Group 2 received the standard exam and additional education provided by a patient navigator. Participants were from the Russian Eastern European immigrant population at a private glaucoma specialty clinic in New York. Determining patients' glaucoma knowledge entailed the administration of the Glaucoma Knowledge Index (GKI) at three time points: before the exam (T1), immediately following the exam in Group 1 and the exam and additional education in Group 2 (T2), and at a 1-month follow-up appointment (T3). The goal of gathering data at T1 was to measure patients' baseline information about glaucoma.

T2 served as a manipulation check to determine whether the provided education was effective and whether there were differences between Group 1 and Group 2 in knowledge comprehension and retention after the appointment. Finally, data gathered at T3 showed whether participants had a significant, persistent, meaningful change with a lasting effect for subsequent recommendation to health care providers. Also evaluated at the 1-month follow-up appointment was whether patients attended appointments and used their drops as prescribed.

STATEMENT OF THE PROBLEM

A Study to assess the effectiveness of compliance assessment tool for patient with glaucoma in a selected hospital, Puducherry

OBJECTIVES OF THE STUDY

- To assess the effectiveness of compliance assessment tool for patient with glaucoma.
- To associate the effectiveness of compliance assessment tool for patient among selected demographic variables
- To assess and effectiveness of compliance assessment tool for patient with glaucoma in a selected hospital

II. RESEARCH METHODOLOGY:

A quantitative research approach and pre-experimental design was selected for the present study. The present study was on 30 patients with glaucoma in SMVMCH, Puducherry who meet the inclusion criteria. Using a convenient sampling technique the samples were selected for the present study. The tool consists of demographic variables and Dichotomous questions. The data of the study was evaluated by using descriptive and inferential statistics.

MAJOR FINDING

Out of 30 samples, 14(47%) of them have Moderate knowledge, 16(53%) of them have low level of knowledge. The findings reveal that mean (50.6) and standard deviation (52.49) of effectiveness of compliance assessment tool for patient with glaucoma. The chi square reveals that it is statistically association with gender belongs to highly significant **-p<0.001others are belongs to non-significance

III. RESULTS AND DISCUSSION

Table 1 shows that out of the People who were interviewed, Majority of the people 13(43%) were in the age group above 40- 50 years. Most of the People 24(80%) were females. Most of the people 30 (100%) belongs to Hindu religion. Most of them, 14 (47%) had qualification as primary school. Majority of the people belongs to private job 10 (33%). Majority people belong to joint family 14 (47%). Half of the people residency located in rural area 15 (50%).

Table 2 Shows that Frequency and percentage wise distribution of the effectiveness of compliance assessment tool for patient with glaucoma Out of 30 samples, 14(47%) of them have Moderate knowledge, 16(53%) of them have low level of knowledge. Table 3 shows that that mean (50.6) and standard deviation (52.49) of effectiveness of compliance assessment tool for patient with glaucoma.

Table 1: Frequency and percentage wise distribution of demographic variables. (n=30)

S.NO	DEMOGRAPHIC DATA	FREQUENCY	PERCENTAGE
1.	**Age**		
	a) 20-39 years	4	13
	b) 30- 40years	5	17
	c) 40-50years	13	43
	d) >50years	8	27
2.	**Sex**		
	a) Male	6	20
	b) Female	24	80
	c) Transgender	0	0
3.	**Religion**		
	a) Hindu	30	100
	b) Muslim	0	0
	c) Christian	0	0
	d) Others	0	0
4.	**Qualifications**		
	a) Illiterate	0	0
	b) Primary school	14	47
	c) Secondary school	8	27
	d) Graduate	8	27
5.	**Job type**		
	a) Government job	8	27
	b) Private job	10	33
	c) Own business	7	23
	d) Unemployed	5	17
6.	**Marital status**		
	a) Married	16	53
	b) Unmarried	14	47
	c) Divorced	0	0
7.	**Types of family**		

	a) Nuclear	5	17
	b) Joined family	14	47
	c) Single	11	37
8.	**Having children**		
	a) 1 children	12	40
	b) 2 children	13	43
	c) 2 or more children	5	17
9	**Type of residence**		
	a) Urban	15	50
	b) Rural	15	50
10.	**Any lifestyle diseases**		
	c) Yes	0	0
	d) No	30	100

Table 2: Frequency and percentage wise distribution of the effectiveness of compliance assessment tool for patient with glaucoma (n= 30)

SCORING INTERPRETATION	FREQUENCY	PERCENTAGE
High	0	0
Moderate	14	47
Low	16	53

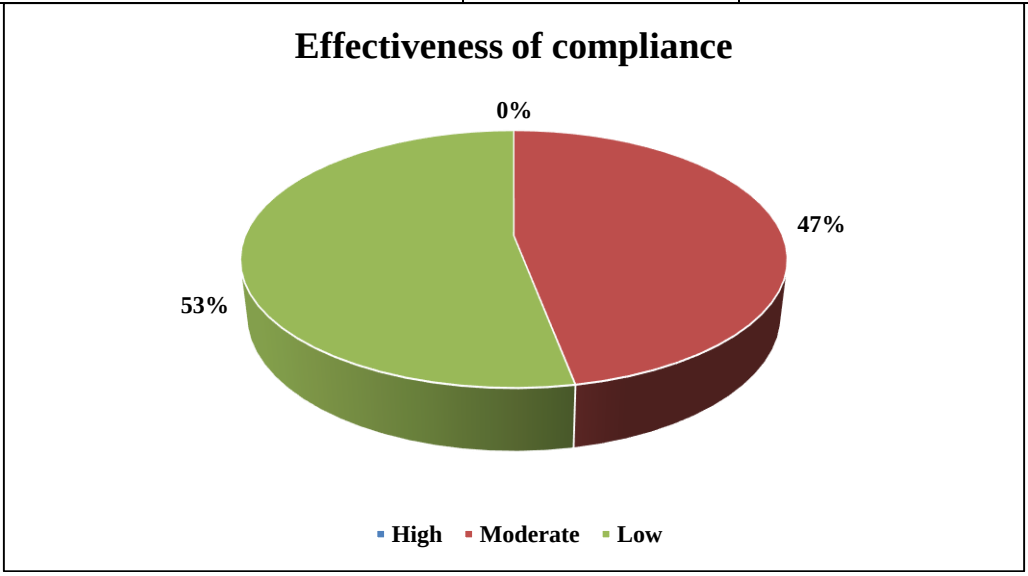

Figure: 1 Frequency and percentage wise distribution of the effectiveness of compliance assessment tool for patient with glaucoma

Table 3: Mean and Standard deviation of the effectiveness of compliance assessment tool for patient with glaucoma (n = 30)

MEAN	STANDARD DEVIATION
50.6	52.49

Table IV: Association on assess the effectiveness of compliance assessment tool for patient with glaucoma in a selected hospital (n = 30)

S.NO	DEMOGRAPHIC DATA	Moderate		low		X^2
		N	%	N	%	
1.	**Age**					
	a. 20-39 years	2	6.7	2	6.7	
	b. 30- 40years	1	3.3	4	13.3	
	c. 40-50years	6	20	6	20	X^2**=1.751** Df=3 P=.6256
	d. >50years	4	13.3	4	13.3	
2.	**Sex**				0	
	a. Male	1	3.3	5	16.7	
	b. Female	13	43.3	11	36.7	X^2**=9.689**** Df=1 P=.0019
	c. Transgender	0	0	0	0	
3.	**Religion**					
	e) Hindu	14	46.7	16	53.3	
	f) Muslim	0	0	0	0	
	g) Christian	0	0	0	0	X^2**=1** Constant
	h) Others	0	0	0	0	
4.	**Qualifications**				0	
	a. Illiterate	0	0	0	0	
	b. Primary school	6	20	8	26.7	
	c. Secondary school	6	20	2	6.7	X^2**=4.171** Df=2 P=.1243
	d. Graduate	2	6.7	6	20	
5.	**Job type**					
	a. Government job	4	13.3	4	13.3	
	b. Private job	3	10	7	23.3	
	c. Own business	3	10	4	13.3	X^2**=3.425** Df=3 P=.3307
	d. Unemployed	4	13.3	1	3.3	
6.	**Marital status**					
	a) Married	7	23.3	9	30	
	b) Unmarried	7	23.3	7	23.3	X^2**=.117** Df=1 P=.7321

	c) Divorced	0	0		0	
7.	**Types of family**					
	a) Nuclear	2	6.7	3	10	X^2**=.158** Df=2 P=.9239
	b) Joined family	7	23.3	7	23.3	
	c) Single	5		6	20	
8.	**Having children**					
	a) 1 children	5	16.7	7	23.3	X^2**=.479** Df=2 P=.7870
	b) 2 children	6	20	7	23.3	
	c) 2 or more	3	10	2	6.7	
9.	**Type of residence**					X^2**=2.143** Df=1 P=.1432
	a) Urban	5	16.7	10	33.3	
	b) Rural	9	30	6	20	
10.	**Any lifestyle diseases**					
	a) Yes	0	0	0	0	X^2**=1** Constant
	b) No	14	46.7	16	53.3	

-p<0.05, significant and **-p<0.001, highly significant

IV. CONCLUSION:

The study findings concluded that The study findings concluded that that the effectiveness of compliance assessment is high there was a significant association found between the compliance assessment tools for patient with glaucoma.

V. RECOMMENDATIONS:

- The study can be conducted to assess the effectiveness of compliance assessment tool for patient with glaucoma in a selected hospital.
- Comparative study can be done between the people.

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