

## Evaluating the Effectiveness of Education in Improving Public Knowledge and Awareness of Glaucoma

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*J Ophthalmic Vis Res* 2019; 14 (1): 121-122

Glaucoma is a neuropathic disorder that causes structural and functional damage to the optic nerve head and leads to visual field loss.<sup>[1]</sup> It is the leading cause of irreversible blindness and the second leading cause of blindness after cataract.<sup>[2,3]</sup> It is the cause of blindness in 2.5 million people worldwide (6.6% of the world's blind population).<sup>[4]</sup> Despite the serious implications of glaucoma, there is a limited level of public awareness regarding it. Nearly 90% of Iranian patients with glaucoma are unaware of their disease, reflecting the low level of public awareness.<sup>[5]</sup> Raising public awareness and educating people, particularly glaucoma patients, plays an important role in glaucoma prevention and treatment.

The present study was designed and conducted to evaluate the effectiveness of educational seminars in increasing awareness of glaucoma.

This quasi-experimental study with a pre-test/post-test design was conducted on 122 participants who were asked to attend a seminar on glaucoma. These participants were informed about the seminar by advertisements in clinics and in public areas of the city of Semnan, Iran. Before the session, the participants' awareness of glaucoma was evaluated using a researcher made questionnaire consisting of 12 questions with the following titles: A) why is glaucoma called the silent thief of sight, B) definition of

glaucoma, C) causes of increasing glaucoma prevalence, D) causes of glaucoma, E) symptoms of glaucoma, F) high-risk groups, G) normal intraocular pressure (IOP), H) diagnostic tests for glaucoma, I) glaucoma prevention methods, J) who plays the main role in treatment, K) therapeutic recommendations, and L) surgical benefits. After initial data collection, participants attended a 4-h educational session about glaucoma, which comprised speeches by two ophthalmologists. After this session, participant awareness was re-measured using the same questionnaire. If a participant was illiterate, questions were asked orally and their responses were written down. Data were analyzed using IBM SPSS Statistics software.

One hundred eighty people participated in this study. Of these, 122 subjects (50 men, 72 women) completed the pre- and post-tests. After attending the one-day seminar, a significantly greater number of participants responded correctly to seven questions [Table 1]. The analysis of results showed that before the seminar, 52.8% of all answers were correct, but after the session, this rate significantly increased to 69% ( $P < 0.05$ ). Participants' responses to other questions showed a non-significant ( $P > 0.05$ ) increase in awareness of these subjects after attending the seminar. The examination of correct and incorrect responses of participants after the seminar showed that the questions about therapeutic recommendations and glaucoma prevention methods had the lowest (26%) and highest rates (93%) of correct responses, respectively.

Thirty-eight participants had a family history of glaucoma. Statistical analysis showed that there was no significant difference in the awareness level of these participants relative to the others [Table 2].

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Received: 25-02-2018

Accepted: 04-11-2018

**Table 1. Evaluation of the awareness of participants of glaucoma based on 12 questions, before and after education**

Titles	Before training		After Training		P
	True (%)	False (%)	True (%)	False (%)	
Why glaucoma is called the silent thief of sight	63	37	70	30	0.230
Glaucoma definition	60	40	83	17	0.001
The reason of increasing prevalence	79	21	80	20	1.000
Cause of glaucoma	36	64	62	38	0.0001
Glaucoma symptoms	46	54	56	44	0.200
People at higher risk of disease	34	66	50	50	0.021
Normal IOP	48	52	83	17	0.0001
Glaucoma detection tests	30	70	60	40	0.0001
The ways of preventing glaucoma	75	25	93	7	0.002
Who plays the main role in treatment	77	23	85	15	0.201
Therapeutic recommendations	16	84	26	74	0.118
Surgical benefits	52	48	67	33	0.031

**Table 2. Comparison between knowledge of participants with family history of glaucoma with others**

	Glaucoma history in the family	n	Mean of correct answer	P
Total score before training seminar	Yes	38	4.4474	0.560
	No	75	5.2267	
Total score after training seminar	Yes	38	7.9211	0.282
	No	75	7.3200	

The results of this study demonstrate the limited knowledge and awareness of glaucoma in a selected Iranian population, and the significant effectiveness of education as a quick and efficient means of raising public awareness about this disease. To achieve better efficacy, correct educational materials should be provided by ophthalmologists.

### Financial Support and Sponsorship

Nil.

### Conflicts of Interest

There are no conflicts of interest.

### REFERENCES

1. Quigley HA, Broman AT. The number of people with glaucoma worldwide in 2010 and 2020. *Br J Ophthalmol* 2006;90:262-267.

2. Bourne RRA, Taylor HR, Flaxman SR, Keeffe J, Leasher J, Naidoo K, et al. Number of people blind or visually impaired by glaucoma worldwide and in world regions 1990–2010: A meta-analysis. *PLoS One* 2016;11:e0162229.

3. Richter GM, Coleman AL. Minimally invasive glaucoma surgery: Current status and future prospects. *Clin Ophthalmol (Auckland, NZ)* 2016;10:189-206.

4. Stevens GA, White RA, Flaxman SR, Price H, Jonas JB, Keeffe J, et al. Global prevalence of vision impairment and blindness: Magnitude and temporal trends, 1990-2010. *Ophthalmology* 2013;120:2377-2384.

5. Suri F, Yazdani S, Elahi E. Glaucoma in Iran and contributions of studies in Iran to the understanding of the etiology of glaucoma. *J Ophthalmic Vis Res* 2015;10:68-76.

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Quick Response Code: 	Website: <a href="http://www.jovr.org">www.jovr.org</a>
	DOI: 10.4103/jovr.jovr_55_18

**How to cite this article:** Aghamollaei H, Nejat F, Jadidi K. Evaluating the effectiveness of education in improving public knowledge and awareness of glaucoma. *J Ophthalmic Vis Res* 2019;14:121-2.