

Barriers to Glaucoma Medication Adherence in Saudi Arabia

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ABSTRACT

Study Design: Cross sectional

Background: Open Angle Glaucoma is the third most common cause of adult blindness in white people and the second most common cause in black and Latino adults. The only established way to slow the onset and progression of glaucoma is to lower intraocular pressure (IOP). Eye drop administration is almost usually used to reduce IOP. However, medical therapy compliance is notoriously low, with reported non-adherence rates ranging from 30 to 80%. Poor compliance has been linked to the development of the illness and blindness. Understanding the causes of glaucoma patients' failure to take their medication is crucial for improving clinical care of the condition.

Methods: Data were gathered for this cross-sectional study using a specially designed questionnaire. a questionnaire with questions about demographics and medication obstacles for glaucoma Following a series of debates among the expert panel, a questionnaire was created, and its Cronbach alpha was determined. The study was carried out in Saudi Arabia's Aseer province.

Results: Eye (20%), eyelid swelling (16%), eye burning (14%) were the major sided effects (Total respondents who observed any side effects were 92).

Conclusion: The amount of eye drops used, the length of the illness, the severity of the sickness, the patient's literacy level, and the cost of the treatment are all factors that affect adherence.

Keywords: Barrier, Glaucoma, Adhere, Diseases

INTRODUCTION

Open Angle Glaucoma is the third most common cause of adult blindness in white people and the second most common cause in black and Latino adults. The only established way to slow the onset and progression of glaucoma is to lower intraocular pressure (IOP). Eye drop administration is almost usually used to reduce IOP. However, medical therapy compliance is notoriously low, with reported non-adherence rates ranging from 30 to 80%. Poor compliance has been linked to the development of the illness and blindness. Understanding the causes of glaucoma patients' failure to take their medication is crucial for improving clinical care of the condition¹⁻⁵.

Glaucoma continues to be the third most common cause of blindness in Western nations, likely in part because to poor adherence. A study that categorised up to 71 adherence hurdles into four categories—regimen, individual patient characteristics, medical provider concerns, and situational factors—found that adherence issues are complicated.

There has only been one prior study done from an in-depth qualitative perspective, which is surprising considering that assessment of

adherence barriers relies primarily on patient's thoughts. This is true despite the recent call for more research relating to adherence with glaucoma therapy and growing acceptance/encouragement for the use of qualitative methods. discovered a few obstacles to adherence for US patients, but the results were inexorably culturally constrained, because adherence is influenced by cultural factors^{6,7}.

One Saudi Arabian base research showed that children with glaucoma have poor adherence to medication. The main aim of this study is to find out the Barriers to glaucoma medication adherence in Saudi Arabia⁸.

METHODS

Data were gathered for this cross-sectional study using a specially designed questionnaire. a questionnaire with questions about demographics and medication obstacles for glaucoma Following a series of debates among the expert panel, a questionnaire was created, and its Cronbach alpha was determined. The study was carried out in Saudi Arabia's Aseer province.

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SPSS ver. 20 software was used to code and enter data for analysis. Descriptive statistics were calculated, and t-test and chi-square tests were performed to assess meaningful differences at the 5% level of significance. A digital version of the questionnaire was used to gather information from the general public. King Khalid University granted its ethical approval. The investigation lasted from January through April of 2023.

RESULTS

Table 1: Demographics and prevalence

Gender	
Male	65%
Female	35%
Age in years	
18-25	25%
26-36	55%
37-47	9%
Above 47	11%
Profession	
Medical	25%
Government service	26%
Private service	24%
Teaching	26%
Monthly Income	
up to 5000 SAR	15%
5000-15000 SAR	60%
Above 15000 SAR	35%
Smoking	
Yes	24%
No	76%
chronic illness	
No chronic diseases	52%
Hypertension	19%
DM	18%
Others	11%
Activity level	
Moderately Active	45%
Slightly Active	25%
Active	30%
When have you found out you have glaucoma?	
1-3 years	50%
4-6 years	25%
7-9 years	18%
above 9 years	7%
Using glaucoma medications, have you experienced any side effects?	
Yes	92.40%
No	7.60%

Table 1 depicted that 65% were males while 35% were females, 55% were lying in age group of 26-36 years, 25% were belongs to medical profession, 60% had monthly income between 5 to 15 thousand 24% were smokers, 52% had no chronic illness 45% were involved in moderate activity level, 50% observed glaucoma between 1-3 years, 92.4% observed side effects.

As per figure 1, Eye (20%), eyelid swelling (16%), eye burning (14%) were the major sided effects (Total respondents who observed any side effects were 92).

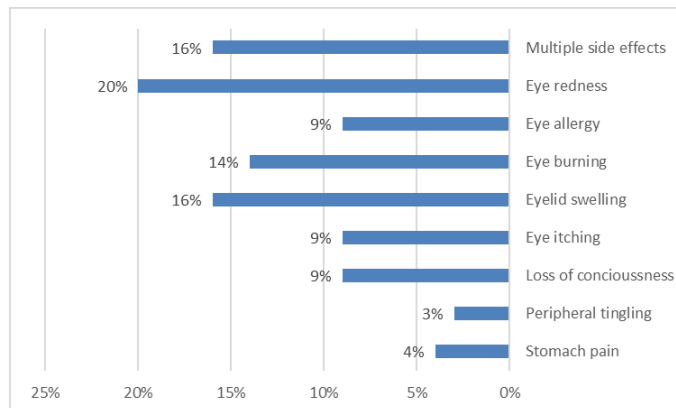


Figure 1: Side effects

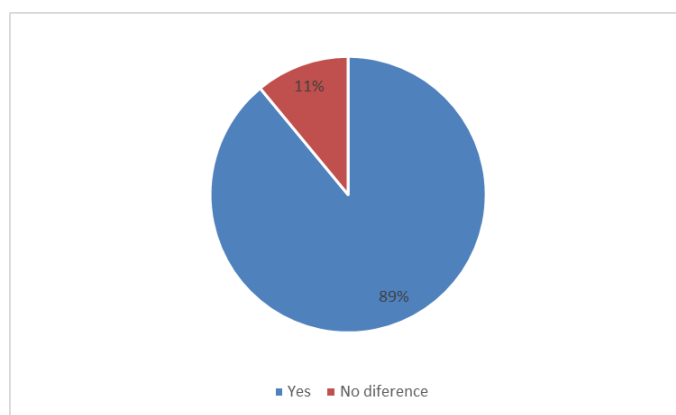


Figure 2: Feeling better after using side effects

As per figure 2, 89% observed better after using eye drops.

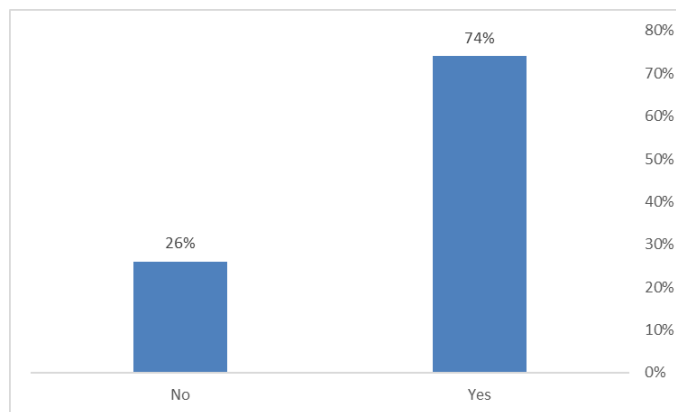


Figure 3: Are you aware of the consequences of not using glaucoma medications?

According to figure 3, 74% aware about the consequences of not using glaucoma medications.

As per figure 4, obvious improvement (26%) was one of the major encouraging factors.

As per figure 5, 30% were facing financial issues for using eye drops.

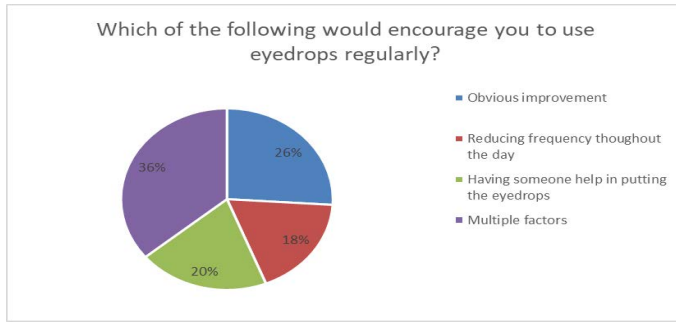


Figure 4: Encouraging factors

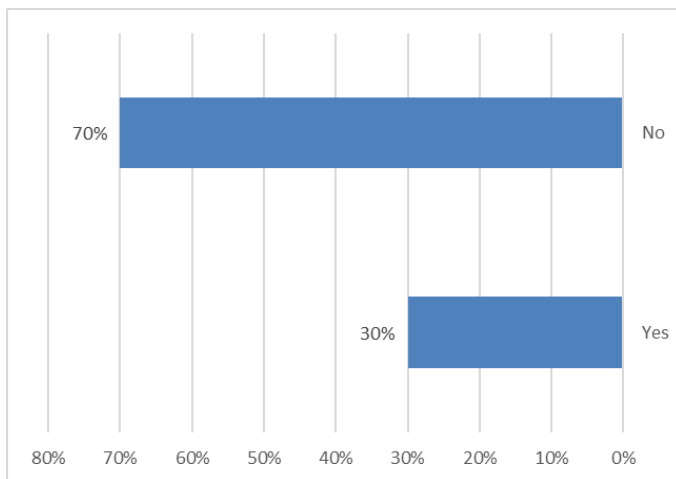


Figure 5: Financial barriers

Table 2: Comparison of gender with side effects

Gender	Side effects		p
	Yes	No	
Male	25	15	N. S
Female	27	25	

As per table 2, we did not observe any significant difference while comparing gender with side effects.

DISCUSSION

When compared to alternative treatments for severe kinds of acne management, isotretinoin is the most affordable option for treating acne patients. Consumers must be informed of the fact that it has been shown to have certain serious negative effects, including teratogenic ones. Therefore, the current study—the first of its kind in the northern region—assessed female acne patients' awareness of the usage of isotretinoin and its negative effects. Since 1982, severe or persistent acne has been treated with isotretinoin (13-cis retinoic acid). Although isotretinoin works well to treat stubborn acne, it also has a number of side effects. These ocular adverse effects include conjunctivitis, blepharitis, and DED. It is crucial that doctors are aware of the medication's side effects¹².

In this study, we examined how well patients understood the ocular side effects of isotretinoin therapy and how often doctors actually prescribed it.

A key indicator of therapy outcome is how well patients understand the risks, benefits, and precautions to take while undergoing treatment. Our study demonstrated that participants' understanding of the uses and

side effects of isotretinoin was adequate (92%) and greater than and comparable to other studies. When asked about their primary sources of information, more than 70% of these respondents named their treating physicians; the other half, on the other hand, cited the internet or social media, friends or family, and the brochure provided with the medication as their sources^{12,13}.

The majority of individuals selected eye as the isotretinoin treatment's ocular adverse effect. These results are in line with data previously reported on the effectiveness of LASIK and photorefractive keratectomy in isotretinoin-using individuals^{14,15}.

The main drawback of this study is that it relied heavily on self-reported survey data, which is subject to reporting bias. Additionally, because of a lack of cross-referencing with the participants' respective ophthalmologists' medical reports, the medical words and diagnoses utilised in the survey may not accurately reflect the participants' actual conditions. Patients were also looked after by various dermatologists. The study has limited generalizability because the statistics are entirely dependent on the patients' sincerity.

CONCLUSION

The amount of eye drops used, the length of the illness, the severity of the sickness, the patient's literacy level, and the cost of the treatment are all factors that affect adherence. By utilizing contemporary techniques for better patient counselling and addressing identified hurdles, it may be possible to prevent the development of serious glaucoma complications that can result in blindness, hence improving quality of life. Research into the dissemination of knowledge to senior glaucoma patients and its effects on drug adherence rates is still needed.

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Competing Interest: None

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