

Original Article

Preferred Method of Education Among Patients in Ophthalmic Care in Saudi Arabia

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ABSTRACT

Purpose: Educating patients about their diagnosis and proposed management is integral part of healthcare. Often patient noncompliance is due to a lack of knowledge that could result in irreversible ocular damage. In an era where access to information is virtually unlimited, an understanding of the preferred method of eye care education among patients is required for greater effectiveness in lowering morbidity and mortality of diseases.

Subjects and Methods: Patients visiting the ophthalmology clinics of a tertiary hospital in Riyadh, Saudi Arabia, were interviewed. This cross-sectional study was conducted between December 2014 and March 2015. A representative sample of 200 patients was enrolled. Close-ended questionnaire covering current and client preferred health promotion methods were used to collect clients' response. Data were analyzed with descriptive statistics.

Results: Out of the 200 participants, 110 (55%) were males. The majority ($n = 154$; 77%) listed an ophthalmologist as their current primary source of information regarding their eye condition. Approximately half of the participants ($n = 95$; 48%) were keen to be educated regarding the causes of the eye disease. The top four educational methods preferred by patients were one-on-one session with an eye care provider ($n = 116$; 58%), a group session with an eye care provider ($n = 30$; 15%), an application on a smartphone ($n = 53$; 27%), video lectures on eye health and diseases ($n = 8$; 4%).

Conclusion: Majority of patients in ophthalmic care prefer a one-on-one session with an eye care provider for their eye care education.

Key words: Education, Ophthalmology, Patients, Preferences

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INTRODUCTION

Patient-centered care is one of the six domains identified by the Institute of Medicine and this care involves informed patients to be part of the team for appropriate care and management.^{1,2} Educating patients about their diagnosis and proposed management is an integral part of the health care including eye care. Often noncompliance by patients due to lack of awareness

could result in irreversible visual disabilities. The priority blinding eye diseases in the Saudi Arabia are diabetic retinopathy, cataract, glaucoma, refractive errors, and childhood blindness.³

Lack of awareness was a major barrier for late detection of sight threatening diabetic retinopathy in Egypt.⁴ Another study demonstrated improved compliance with glaucoma medications among patients who underwent patient education combined

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with behavioral interventions.⁵ Many surreptitious diseases such as open angle glaucoma and cataract resulted in severe visual impairment without the patient's knowledge. Hence, imparting knowledge about the risk of eye conditions and the related visual disabilities could improve patient cooperation and care.

A number of methods for patient health-care education are available including, lectures, audiotapes, videotapes, written materials, computer technology, and role-playing and other methods.⁶ However, the impact is variable due to factors such as literacy, gender, disparity in access to knowledge and age.⁷ Hence the effect of patient health-care education can be can vary despite the best attempts of the health-care practitioner.

Patients in eye care prefer personalized education such as one-on-one sessions with their provider or a health educator.⁸ In contrast, promotional materials (both printed and electronic) are not preferred to the same extent as personalized one-on-one sessions. Topics related to aging and changes to the eye were more popular in the elderly population. Information on eye diseases linked to racial risk factors was more popular with high-risk racial groups.

There are numerous studies from the Western hemisphere on the topic of patient education. However, to the best of our knowledge there is little to no information on the educational preferences of patients in ophthalmic care in the Middle East, especially Saudi Arabia. The aim of this study is to assess the current modes of education and evaluate preferred method of education among patients in eye care. The outcomes of this study will help develop effective educational interventions and materials, and maximize patient involvement in the learning process.

SUBJECTS AND METHODS

The Institutional Research Board of the King Khaled Eye Specialist Hospital (KKESH), Riyadh, Saudi Arabia, approved this study. This was a cross-sectional survey. Patient anonymity was maintained for this study, hence written patient consent was waived. The study was conducted between December 2014 and March 2015.

To calculate the sample size, we assumed that 55% of ophthalmic patients prefer one-on-one sessions with their doctor.⁸ Nearly 12,000 eye patients visit the eye clinics at KKESH monthly. These patients comprised the study population.⁹ To achieve 95% confidence interval, 10% acceptable margin of error and a study design effect of two, at least 200 randomly selected eye patients had to be surveyed.

Three senior researchers and two medical students were the field investigators for this study. A close-ended questionnaire that has been previously published was used in this study.⁸ This questionnaire inquired about the preferred method of

education in ophthalmic care among patients.⁸ To ensure that the questions and the language used in the questionnaire were easily understood by patients, we performed a pilot survey on 10 patients who were not involved in the main survey. Patients who were able to read and understand the questionnaire were included in the study sample, those who were illiterate or unable to read the questionnaire due to their eye condition, were assisted by field investigators to complete the survey. Exclusion criteria were patients under the age of 10, and those who are diagnosed with psychiatric disorders or physical disability that limited their ability answer the questionnaire.

Fifteen close-ended questions in the survey evaluated the current modes of the patients learning about their eye health and eye diseases. We also inquired about their preferred method of education. The questions were grouped based on demographic data, methods currently used by patients to seek knowledge, eye topics of interest, the component of eye conditions of interest to patients, proposed ways to learn about eye health diseases, and finally, the preferred location for health education.

Descriptive and correlation statistics were used to analyze patient responses. The data from the survey was transferred to a Statistical Package for Social Studies (SPSS 22) (IBM Corp., Armonk, NY, USA) spreadsheet. Descriptive analysis was performed to calculate the frequencies and percentage proportions of the responses. The proportion of the preferred method was associated with gender, age group, literacy, and area of residence.

RESULTS

There were 110 males (55%) and 90 females (45%) that comprised the study sample. There were 198 Saudis (99%) and 2 non-Saudi participants (1%). There were 175 (88%) of participants who lived in urban areas and 25 participants (12%) lived in semi-urban areas.

Majority of participants ($n = 69$; 35%) had a bachelor's degree, whereas a minority of the study sample had a master's degree or doctorate, ($n = 7$; 3%) and ($n = 3$; 1%) respectively. Thirty-four participants (17%) have not been to school, whereas 20 participants (10%) had a primary school degree and 19 participants (10%) completed middle school and 48 participants (24%) were high-school graduates.

The questionnaire was distributed in KKESH, which receives referral cases from the entire country. Almost half of the total number of participants ($n = 96$; 48%) were from the central province, followed by the Southern Province ($n = 54$; 27%). The remaining participants were from the Western Province ($n = 16$; 8%), Northern Province ($n = 6$; 3%), and the Eastern Province ($n = 3$; 1%).

Majority of participants ($n = 168$; 84%) had easy access to an eye care provider. Ninety-six percent of patients were aware of their diagnoses ($n = 191$), and 90% ($n = 179$) were informed by their eye doctors.

The methods by which the participants sought knowledge regarding their condition is presented was; ($n = 154$; 77%) agreed that an ophthalmologist/optometrist is their main source of information, followed by primary medical doctor ($n = 19$; 9.5%), and the Internet ($n = 19$; 9.5%) [Table 1].

The top three topics that patients wanted more information on were cataract ($n = 53$; 26%), diabetic eye diseases ($n = 33$; 16.5%), and dry eye ($n = 23$; 11.5%). The main component of information that the participants wanted to know was the cause of the eye condition ($n = 95$; 48%). In our study, there was no difference in the preferred method of education and gender, age group, literacy, and residence.

One-on-one session with an eye care provider was the preferred method of education among participants ($n = 116$; 58%), followed by group sessions with an eye care provider ($n = 30$; 15%), and 9.5% ($n = 19$) of participants preferred having an application on a smartphone containing all the relevant information regarding their condition available at any time and any place [Table 2].

The preferred location for health education and promotion was the hospital ($n = 97$; 48.5%), at home ($n = 52$; 26%), at work ($n = 31$; 15.5%), and primary health-care centers ($n = 19$; 9.5%).

Table 1: Methods currently used by eye patients to seek knowledge	
	Methods currently used n (%)
Primary medical doctor	19 (9.5)
Ophthalmologist/optometrist	154 (77.0)
Internet	19 (9.5)
Printed education material	3 (1.5)
Television	2 (1.0)
Friends/family	3 (1.5)

Table 2: Proposed methods to learn about the eye and eye diseases	
	n (%)
One-on-one session with eye care provider	116 (58)
Group sessions with eye care provider	30 (15)
One-on-one session with eye health educator	2 (1)
Group session with professional eye health educator	5 (2.5)
Smartphone application by eye professionals	19 (9.5)
Lectures by expert eye care specialists	3 (1.5)
Video lectures	8 (4)
Printed educational materials selected by eye care provider	5 (2.5)
Printed educational material selected by you	1 (0.5)
Website recommended by eye care provider	3 (1.5)
Website of your selection	2 (1)
Other	6 (3)

DISCUSSION

This study enhances our understanding of patient educational preferences in a tertiary care ophthalmic facility in Riyadh, Saudi Arabia. An evaluation of the demographic profile of the study sample, and comparing it to the total patient population, suggests that the study population is in fact representative of the ophthalmic patient population.

The main outcome of this study is that the majority of patients in ophthalmic care prefer one-on-one educational sessions with an eye care provider. This was preferred over one-on-one session with a professional eye health educator. This raises the question of the patient's perception towards health educators. Pamphlets were listed with the proposed methods of education, and it ranked last based on patients' responses ($n = 1$; 0.5%). This observation should alter the decision-makers views regarding printed educational materials, and direct their time, effort and most importantly, money, towards other means of education that are preferred by patients in ophthalmic care. This differs from Rosdahl *et al.*'s study,⁸ where 36% of the respondents preferred printed material as a source of education. The difference between studies can be attributed to the fact that health-care providers deal with a wide spectrum of patients on a daily basis, and one educational method may not benefit all patients. Hence, it is important to recognize each patient's preference and to tailor the learning process based on their needs and other variable factors such as educational level, age, gender, and most importantly, health literacy.

Although this study investigated the correlation between educational preferences of patients and their educational level, no significant differences were observed. However, another important variable that was not considered while carrying out this study was health literacy among patients. Health literacy is defined by the Centers for Disease Control and Prevention as, "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."¹⁰ Many studies in the last decade have explored the impact of health literacy on the outcome of various diseases.¹¹⁻¹³ A paper published in the *Journal of Health Communication*, interpreted the cause of poor health to be related to low levels of education.¹⁴

A large portion of respondents preferred to be educated in a hospital setting ($n = 97$; 49%), followed by their residence ($n = 52$; 26%) via the Internet, videos, lectures, and a smartphone application, followed by workplace and a primary health-care center ($n = 31$; 16%) ($n = 19$; 10%). Although majority of health education is commonly carried out at hospitals, other locations where a larger audience can be reached must be considered to increase awareness of eye health and diseases.

In the current study, respondents were allowed to choose more than one answer for each question, which in a way limits the accuracy of the results. Furthermore, the study was performed on patients visiting a tertiary eye care center which limits the generalizability of the results to other health practices.

CONCLUSION

Educating patients about their disease reduces mortality. Therefore, finding the appropriate learning tool is crucial to accomplish this goal. This study increases the awareness of important stakeholders in the field of patient education regarding the learning preferences of patients, and to constantly evaluate the effectiveness of the learning methods provided to them.

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Conflicts of interest

There are no conflicts of interest.

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