



## Original Research Article

# Survey of patient's opinion on eyeglasses and eye care in the semi-urban population of South-Delhi India

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## ARTICLE INFO

### Article history:

Received 24-04-2022

Accepted 30-04-2022

Available online 06-10-2022

### Keywords:

Eyeglasses

Spectacles

## ABSTRACT

**Objective:** To learn about people's day-to-day perspectives and knowledge of eyeglasses and eye health and to understand the level of awareness about the use of eyeglasses and eye/care among the population of South Delhi.

**Materials and Methods:** An open online survey questionnaire was distributed to people via social media platforms (email, Facebook, Instagram, WhatsApp, Telegram, and so on).

**Result:** Males participated more than females, with 51%. At 45%, the 18–30 age group was found to participate more, and at 40 years of age, survey was taken by 14%. Most individuals visit an ophthalmologist when they notice some problem (48%). Both metal and plastic-quality eyeglasses were used by the population. at a rate of 44%. The same percentile for optical purposes with single vision corrective lenses at 28% was found. 67% of population were found to be well-satisfied population after wearing spectacles.

**Conclusion:** It was discovered that it would be beneficial to provide basic education on the types of refractive error and other causes of low vision, how eyeglasses may or may not help, a discussion of common treatments for eye problems, and clear instructions on when and when not to wear eyeglasses.

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## 1. Introduction

Eyeglasses or spectacles consist of a lens (with or without a refractive power lens) and a frame to improve visual quality. Spectacles were used as a refractive power correction accessory, as sunglasses, or for cosmetic purposes (i.e., transition glasses). It is always found that having spectacles is preferred first over contact lenses in the population.

People who wear spectacles will try to avoid them by wearing contact lenses or undergoing refractive surgery. So, to evaluate the knowledge, attitude, and practice (KAP) of eyeglasses, this study was conducted.

Individuals with refractive errors, especially many spectacle wearers, are potential beneficiaries of contact lenses and refractive eye surgeries. However, spectacle wearers rarely request alternatives to eyeglasses for correcting refractive errors in resource-limited settings. This study was conducted to determine awareness, attitude, and reasons for the poor interest among spectacle wearers in contact lenses and refractive eye surgery for resource-

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limited, resource-limited economies.

There is a population whose eyes are weak by birth and with increasing age. Therefore, their problems are corrected with the help of eyeglasses. The types of spectacle correction/refractive error with their treatment are as follows:

### 1.1. Myopia

1. Short-sightedness.
2. The image is brought to the retina's attention.
3. The eye is too long for the refractive power of the lens and cornea.
4. Near-sighted people typically see well up close but have difficulty seeing far away.

Concave or minus lenses for myopia treatment, Spectacles, Contact Lenses, and Laser Surgery

### 1.2. Hypermetropia or hyperopia

1. Long sightedness, or far sightedness.
2. The image is brought into focus behind the retina.
3. The eye is too small for the refractive power of the lens and cornea.

### 1.3. Treatment of hyperopia

1. Treatment is with a convex or plus lens.

### 1.4. Astigmatism

Astigmatism is a type of refractive error wherein the refraction varies in the different meridians of the eye. Frequently, the rays of light entering the eye cannot converge to a point of focus but form focal lines.

### 1.5. Treatment of astigmatism

1. Correction is done by cylindrical lenses.

One more refractive error is there, but it is due to those over 40 years of age.

Presbyopia usually occurs after 40 years of age.

In this condition, the eye is unable to focus on nearby objects. It is not a refractive error, but a condition of physiological insufficiency of accommodation leading to failing vision nearby.

Here are the different types of prescription lenses:

1. Single vision
2. Bifocal lens
3. Trifocal lens
4. Progressive lens

Single vision lenses are the most affordable and widely used type of eyeglass lenses. They have the largest field of vision

because they only correct vision at one specific distance (either far or near).

**Bifocal lenses:** Bifocal lenses are multifocal, meaning they have two different "powers" in them—these different sections of the lens correct distance vision and near vision. Bifocal lenses are prescribed for people with multiple vision problems, such as presbyopia (age-related farsightedness) and myopia (near sightedness).

**Trifocals:** These are similar to bifocals, except they have the additional power to correct intermediate vision. The intermediate portion may be used to view a computer screen.

Progressive lenses are suitable for anyone who requires bifocals or trifocals. They provide the same correction for near, intermediate, and distance vision without the lines between each section. Many people prefer these lenses because the transition between fields of vision is smoother.

Many studies on refractive errors<sup>1-6</sup> have been conducted, Consideration of spectacles, wearer study was found to be less compared to refractive error. This study is going to provide analytical data on behalf of "KAP".<sup>7</sup>

## 2. Materials and Methods

This study is based on a quantitative, descriptive cross-sectional design with a semi-structured questionnaire for South Delhi Population. An online survey has been taken by the platform Google forms. Eyeglasses Wearers and Non-Wearers below 5 years of age, with any systemic illness and trauma, were excluded. More than 5 years of age participants were questioned with 22 questionnaires (Table 1) through a survey by online mode via social media platforms through the mail, Facebook, etc. the questions are designed to have the knowledge and to know about the attitude towards eyeglasses of participants of the South Delhi Population. The Knowledge of eyeglasses will be marked with a linear scale ranging from good to average and poor. As a result, questions give the status of Day-to-Day practice towards eye care habits of the Participants, the responses at the providing the level of knowledge, attitude towards their practice of eyeglasses. Participants' information is taken confidentially with informed consent. Ethical approval has been taken by the Institutional ethical committee of Jamia Hamdard New Delhi before the study. The collected data has been studied with statistical analysis that has been done using Microsoft Excel and noted in percentile format by using SPSS software (Table 3). Participants above 5 years of age with normal health, Eyeglasses Wearers, or Non-Wearers have been taken into the study as Inclusion Criteria.

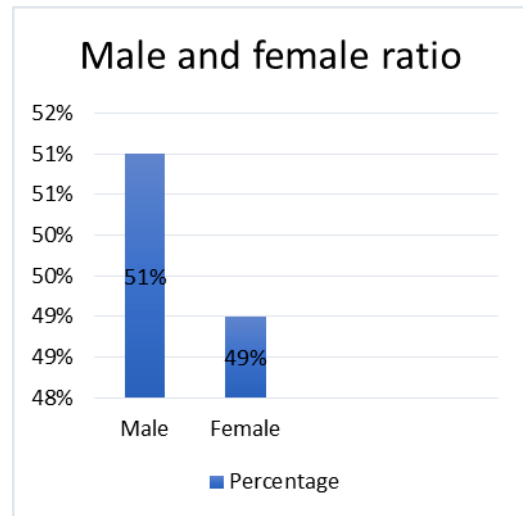
## 3. Result

The survey has completed 100 subjects. In this study, Males have participated more than females with 51% (Figure 1)

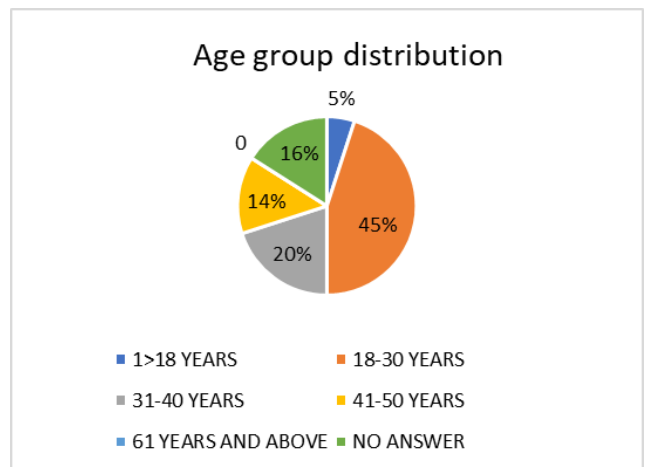
**Table 1:** Research questions

1.	Name
2.	Email Address
3.	Phone Number
4.	Gender
5.	Your Age.
6.	How long have you been using glasses?
7.	How often do you visit an ophthalmologist
8.	What is your education level?
9.	Which type of eyeglasses you are using?
10.	What type of eyewear do you prefer to wear?
11.	What kind of lenses do you prefer for eyeglasses?
12.	What is your material of choice?
13.	What best fits your frame budget?
14.	How often do you think you need to get new eyeglasses?
15.	Are you satisfied while using glasses?
16.	Any other comments to share with us on basis of the above question
17.	If you have power in the eye due to headache, pain, or any other difficulty while wearing eyeglasses state the level of severity of the given reasons? 20-30% 40-60% less than 5%
18.	What are the reasons behind preferring eyeglasses?
19.	Do you use eye drops for lubrication?
20.	Do you think that you need eyeglasses?
21.	When will you wear your eyeglasses?
22.	Which type of eyeglasses you are currently using?

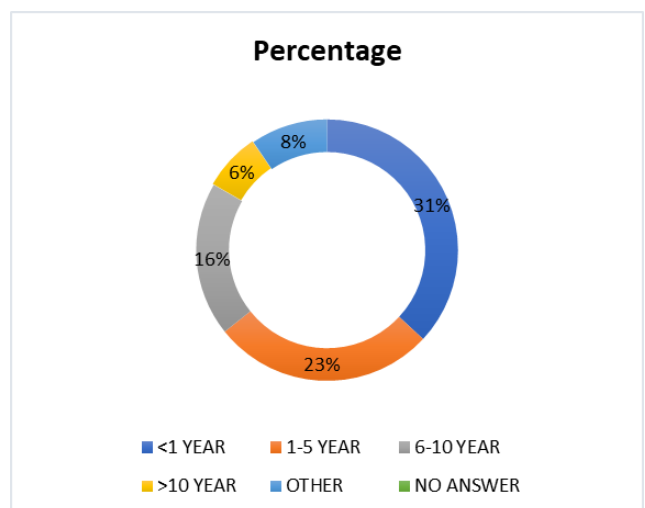
the 18-30years age group was found to participate more at 45%, and above 40years of age, participation was found to be at 14% (Figure 2). As spectacle ware use spectacles less than one year by 31% but somehow participation has use spectacle within 1-5 years by 23% (Figure 3). The majority of the individuals visit an ophthalmologist when they catch up with some problem by 48%. As both metal and plastic quality eyeglasses were used by the population with 44%.and same percentile for optical purposes with single vision corrective lenses by 28% (Figure 5). Materials are considered more for eyeglasses as the majority of participants use eyeglasses of plastic material 35% (Figure 4). Now the days the population is having that much knowledge about the spectacles so they will look range as they won't think about their budget by 28% (Figure 6). A well-satisfied population has been estimated after wearing spectacles by 67% (Figure 8). A very less population has been estimated with less than 5% complications after wearing glasses by 47% and the majority of participants using glasses for better vision 47% for eyeglasses (Figure 7).



**Fig. 1:** Result for sex ratio



**Fig. 2:** Results for age distribution



**Fig. 3:** Result for how long participants are using glasses?

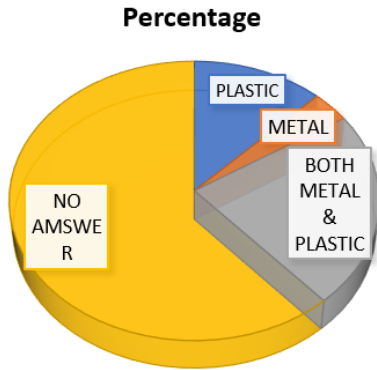


Fig. 4: Result for the type of eyeglasses best-fitted participants use?

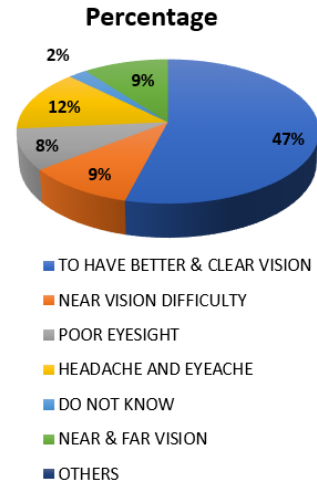


Fig. 7: Results for reasons preferring eyeglasses

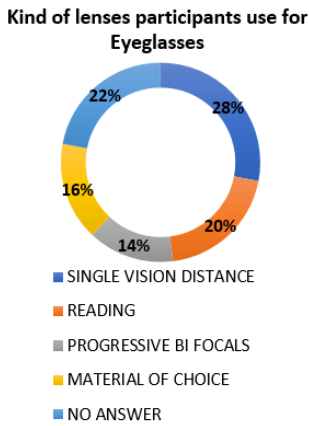


Fig. 5: Result for kind of lenses participants use eyeglasses?

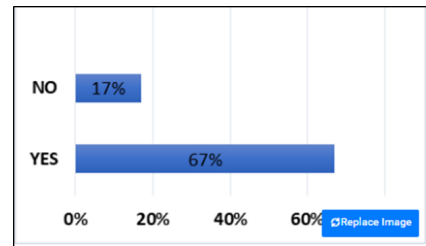


Fig. 8: Results for satisfaction with eyeglasses?

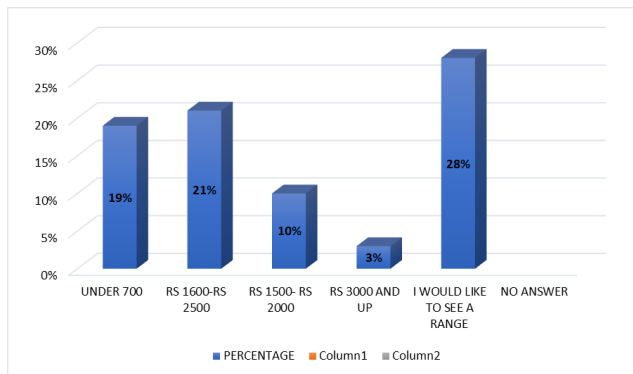


Fig. 6: Budget range for eyeglasses

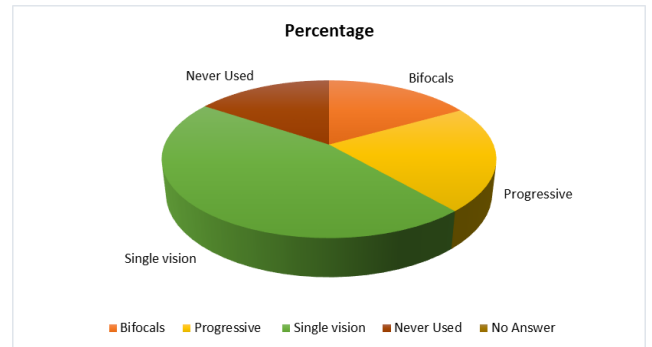


Fig. 9: Type of eyeglasses used

**Table 2:** Questionnaire response rate n=100

<b>1. Gender</b>	
Male	51%(51)
Female	49%(49)
<b>2. Your Age</b>	
<18 years	5%(5)
18-30 years	45%
31-40 years	20%
41-50 years	14%
61 years and above	0.00
<b>3. How long have you been using glasses?</b>	
<1 year	31%
1-5 year	23%
6-10 years	16%
>10 years	6%
other	8%
<b>4. How often do you visit an ophthalmologist</b>	
Regularly	19%
When you catch up with some problem	48%
Other	17%
No answer	16%
<b>5. What is your education level?</b>	
Primary school	12%
High school	8%
University	64%
No answer	16%
<b>6. Which type of eyeglasses you are using?</b>	
Plastic	24%
Metal	7%
Both Metal & Plastic	44%
<b>7. What type of eyewear do you prefer to wear?</b>	
Optical	44%
Sunglasses	15%
Lens Choices	21%
<b>8. What kind of lenses do you prefer for eyeglasses?</b>	
Single Vision Distance	28%
Reading	20%
Progressive Bi-Focals	14%
Material of Choice	16%
No answer	22%
<b>9. What is your material of choice?</b>	
Metal frames	25%
Plastic frames	35%
Other	23%
No answer	17%
<b>10. What best fits your frame budget?</b>	
Under Rs 700	19%
Rs1600-Rs 2500	21%
Rs1500-Rs 2000	10%
Rs 3000 and up	3%
I would like to see a range	28%
No answer	19%

Continued on next page

Table 2 continued

<b>11. How often do you think you need to get new eyeglasses?</b>	
<1 year	36%
1-5 year	33%
6-10 year	8%
>10 years	2%
No answer	21%
<b>12. Are you satisfied while using glasses?</b>	
Yes	67%
No	17%
No answer	16%
<b>13. If you have power in the eye due to headache, pain, or any other difficulty while wearing eyeglasses state the level of severity of the given reasons? 20-30% 40-60% less than 5%</b>	
20-30%	38%
40-60%	17%
less than 5%	47%
70-90%	3%
<b>14. What are the reasons behind preferring eyeglasses?</b>	
To better/clear vision	47%
Near vision difficult/reading	9%
Poor eyesight/bad vision	8%
Head pain/eye pain/headache	12%
Do not know	2%
Near & far vision	9%
Other	13%
<b>15. Do you use eye drops for lubrication?</b>	
Yes	42%
No	58%
<b>16. Do you think that you need eyeglasses?</b>	
Yes	67%
No	19%
Do not know	14%
<b>17. When will you're your eyeglasses?</b>	
Reading/writing/long-distance	33%
Work (cooking/ tailoring)	1%
Headache/pain	12%
Watch television	13%
Do not know	6%
Walking	1%
All the time	26%
No answer	8%
<b>18. Which type of eyeglasses you are currently using?</b>	
Bifocals	14%
Progressives	18%
Single vision	38%
Others	13%
No answer	17%

#### 4. Discussion

This study shows that most of the participants say that the reason for using eyeglasses is having a better vision and says that they have good knowledge about the eyeglasses as they won't compromise with the budget, but they would like to see a range of eyeglasses by 28% and some are not interested to answer for the question by 19%. In this study, 15% of participants were wearing eyeglasses for cosmetic purposes and 44% for refractive purposes. Most of the eyeglass users were males, and the reason was refractive error. A study was done by Abdulkabir Ayansiji Ayanniyi and reported that among 214 spectacle wearers revealed that only 158 (74%) had worn eyeglasses for at least one year.<sup>8</sup> In our study, we found that only 36% majority of participants had worn eyeglasses for at least one year. The results of these studies discussed above show similarities with our current study which shows that many spectacle wearers are aware of changing their spectacles within one year. Most ophthalmologists/Optometrists recommends that spectacle wearers should visit for eye check-up within 6 months. In our study, 48% of the participants were found to have a visit to an ophthalmologist when they catch some problem. Another study which was done by K Chawla also noted that 24.4% of participants reported with there was nothing wrong with their eyes, or they did not know about the eye problems.<sup>9</sup> In this study, only 6% of the participants don't know where and when to use eyeglasses.

#### 5. Conclusion

In the semi-urban population of South Delhi, India, a survey of patients' opinions on eyeglasses and eyecare was conducted. We conclude that the general public should be made aware of the various types of refractive error and other reasons of low vision, as well as how eyeglasses may or may not help. It would be useful to have a discussion of typical treatments for eye disorders as well as clear directions on when and when not to wear eyeglasses.

#### 6. Conflict of Interest

None.

#### 7. Source of Funding

None.

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**Cite this article:** Bushra D, Sharma K, Kamat OS, Bharti D, Khan M, Goel M. Survey of patient's opinion on eyeglasses and eye care in the semi-urban population of South-Delhi India. *Indian J Clin Exp Ophthalmol* 2022;8(3):351-357.