

# A Study to Check the Awareness and Myths about the Contact Lens among the Educated Population of the Northern Uttar Pradesh, India

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## ABSTRACT

**Purpose:** The aim and purpose of this study are to determine the awareness among people about contact lenses and also about the facts and myths regarding contact lens.

**Methodology:** A cross-sectional survey on 300 people of northern U. P. having the refractive error. It was done through a Questionnaire-based survey for which a structural, standardized, self-administered questionnaire in the English language was made, including three sections named Section A, B, and C. Section A is common for all the participants, Section B was for contact lens wearers and Section C was for those who were not Contact lens wearer but they were spectacle wearer.

**Result:** Among the 300 subjects 32% (96 people), were regular users of contact lens whereas 68% (204 people) have never tried Contact lens because of the myth in their minds about contact lens. 38% (114 people) think about the contact lens is a thin, curved plastic lens that is used to correct refractive error. 12% (36 people) think that this is an eye protection device and 28% (84 people) think that it is used for cosmetic purposes.

**Conclusion:** Everyone who participated in this survey was well educated and possesses many misconceptions about the contact lens. Due to which they avoid the use of Contact lenses and also suggest the same to others. So it can be concluded that there is an urgent need of enhancing the knowledge about contact lens among people.

**Keywords:** Contact lens, Myths, Refractive error, Awareness, Vision-related problems

## INTRODUCTION

A Contact lens, also known as a contact, is a refractive error corrective, cosmetic, prosthetic, and therapeutic lens usually placed on the cornea over the pre-corneal tear film of the eye. Contact Lens remains on the Cornea by means of the cohesive, adhesive force and surface tension of the tear film (that is composed of different living and dead cells as conjunctival, corneal, and keratinized epithelial cells polymorphonuclear neutrophils, eosinophils, lymphocytes, and plasma cells). The contact lens floats in the tear film, being a tear layer anterior and posterior to the lens. The Contact lens is pulled onto the corneal surface by the tear film on the anterior surface of the lens<sup>1</sup>.

Cosmetic benefits and convenience were the most common reasons cited for Contact lens use<sup>2,3,4</sup>. Contact lenses remain the second preferred option for visual correction for these, particularly among young adults, not only due to their cosmetic acceptance, improved visual field, and spatial resolution but also because of their use that facilitates many sporting activities, active lifestyle (traveling) and opens certain professions, closed to the bespectacled impaired vision persons<sup>5,6</sup>.

With the evolution of improved corneal imaging, there is a higher and early diagnosis of irregular corneas and corneal ectasia, thus adding a host of other conditions for customized contact lens fitting. In response to this increasing requirement for contact lens rehabilitation, customized refinements in both material and designs have come up, like Rose-K™, Keratsoft™, Ortho-K, other scleral, minisclerals as lenses to mention a few. Choosing the right lens material, shape, designs aligned to patient requirements, requires knowledge of the current resource and fitting techniques by Optometric/Ophthalmic fraternity and allied fields<sup>7</sup>.

The popularity of Contact lenses continues to increase with regular improvement in materials and variants suitable for a variety of users<sup>8</sup>. Numerous studies have shown that Contact lenses can lead to serious problems that threaten ocular health if certain basic guidelines of use are not followed, particularly those concerned with hygiene and cleaning<sup>9,10,11,12,13</sup>.

It is crucial to raise social awareness regarding the ocular health problems that may be caused by the contact lenses that are purchased without a prescription, details of parameters of the eye and used without the proper examination, practical training, and trial provided by an Optometrist/Ophthalmologist<sup>14,15</sup>. Donshik et al noted that non-adherence to guidelines for safe Contact lens wear is situ a major contributor to contact lens-related complications and discontinuation of contact lenses. They also emphasized that lack of information, bad habits, misconceptions, and the inadequacy of available information sources; all play a role in this noncompliance<sup>16</sup>. Wu et al evaluated non-compliant behavior in contact lens users and identified hand hygiene, improper lens care, and inability to remember to follow-up appointments as the main problems, noting that the ability to purchase contact lenses online results in unawareness regarding follow-up examination<sup>17</sup>.

## **MATERIALS & METHODS**

### **METHODOLOGY**

A cross-sectional survey was done on 300 general educated people of the northern U.P. having a refractive error. It was done in the time period of November - December 2020. It was done through a Questionnaire-based survey for which a structural, standardized, self-administered questionnaire in the English language was made containing open and close-ended questions.

Informed consent was signed by the participating subjects and we assured them about the confidentiality of their responses. Approval was taken before the study from the subjects participating in this study. The questionnaire prepared for the survey is divided into 3 - sections:

Section A is common for all the participants in which some general questions were asked to the participants.

Section B is given for only those participants who were contact lens wearer

Section C is given for participants who never used contact lens for any purpose. The questionnaire prepared for the survey is the following:

#### **Section A:**

(Which is common for all the participants?)

1. Have you ever heard the name of contact lens?
2. What do you think about the contact lens?
3. Have you ever used a contact lens?

#### **Section B:**

(For people who used Contact lens)

1. Which type of Contact lens do you use?
2. Which type of wear modality do you use?
3. Have you ever gone to sleep at the night without removing contact lens?
4. If a problem (complication) is occurring due to Wearing contact lenses then what?
5. If complications occur what are the reasons for that?
6. If you used a Contact lens then what is the reason to discontinue the contact

lens? (For people who discontinued the contact lens)

**Section C:** (For people who never used contact lens)

1. If you are not using a Contact lens then why?
2. Why did you never use contact lenses?
3. Who stated the above reason/ misconception about contact lens?

**RESULT**

A comparison of statistical analysis on 300 educated people (n= 300) reveals that (mean age= 19.5+-4.5) out of them only 100 subjects (32.33%) were contact lens users and 200 subjects (66.66) were spectacle wearers. (Figure .A.1)

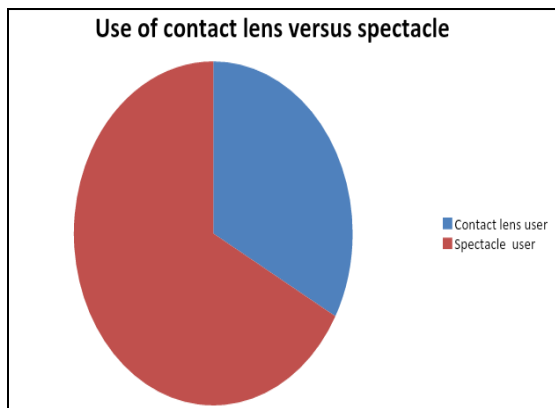


Fig. A1 Graph showing usage of contact lens and spectacle for refractive error correction.

Figure A2 graph showing the thinking of people about the contact lens:

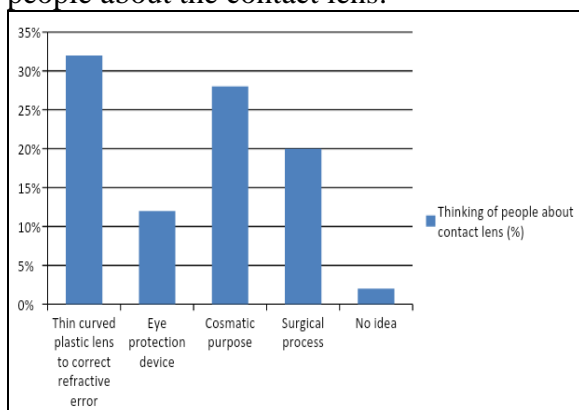


Fig. A2 Graph showing the thinking of people about contact lens.

114 people (38%) think about the contact lens that it is a thin, curved plastic lens which is used to correct the refractive error. 36 people (12%) think that this is the

eye protection device and 84 people (28%) think that it is used for the cosmetic purpose. 60 people (20%) think it is a surgical process and 6 people (2%) have no idea about that.

**Section B: (for contact lens wearer)**

Out of total contact lens wearer only 8 people (8%) people uses rigid gas permeable contact lens and 92 people (92%) uses soft contact lens. (Figure B1)

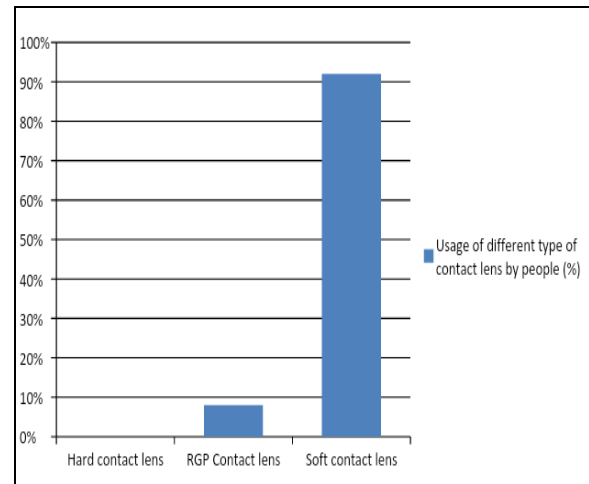


Fig. B1 Graph showing use of different type of contact lens by contact lens wearer

Out of that the type of daily wear modality used by 52 people (52%), whereas flexible wear is used by 25 people (25%), extended wear used by 20 people (20%), and other used by (3%) 3 people. (FigureB2)

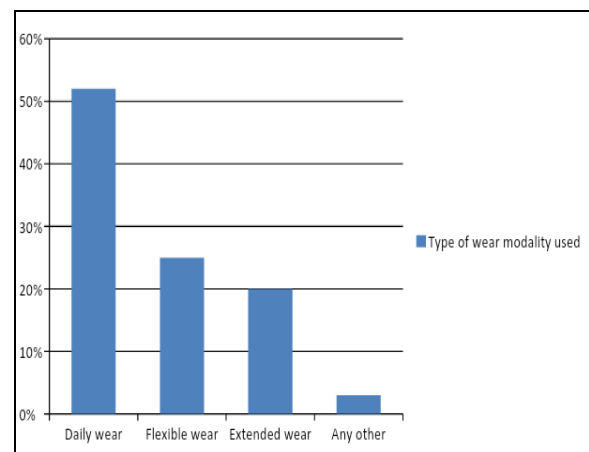


Fig B 2 Graph showing type of wear modality used

Some people discontinued the contact lens due to some reason like fitting issue, uncomfortable, difficult to maintain

hygiene, ( figure B3) graph showing that 15% people discontinued the contact lens due to fitting issue, 10% people discontinued the contact lens due to complication of contact lens, 12% people discontinued the contact lens due to care and maintenance issues, 10% people

discontinued because contact lens are uncomfortable for them, 12% people discontinued due to difficulty to maintain hygiene , 12% due to trouble to take care of, 35% people discontinued due to high rate of contact lens, 13% people discontinued due to any other issues.

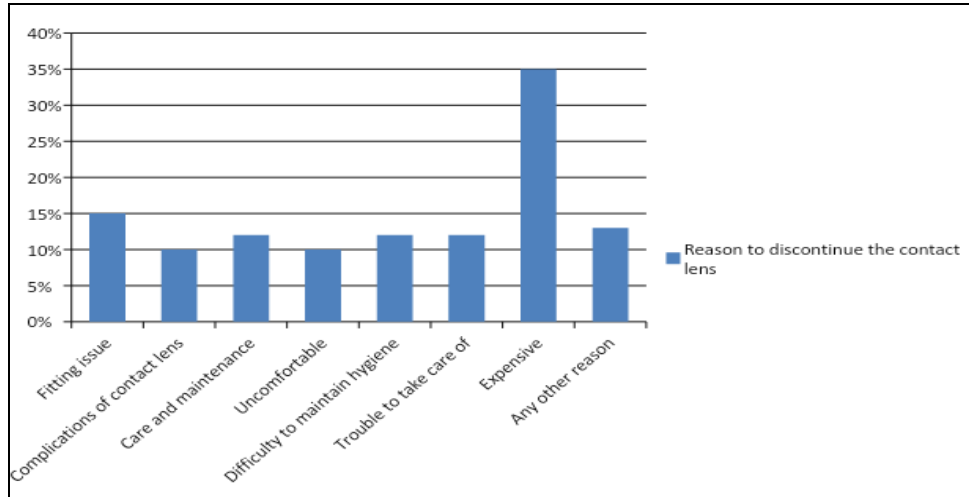


Fig. B3 Graph showing the different reasons to discontinue the contact lens

Figure B4 graph shows that 10 people (10%) by mistake ever gone to sleep in night without removing the contact lens whereas the 90 people (90%) sleep in night after removing the contact lens.

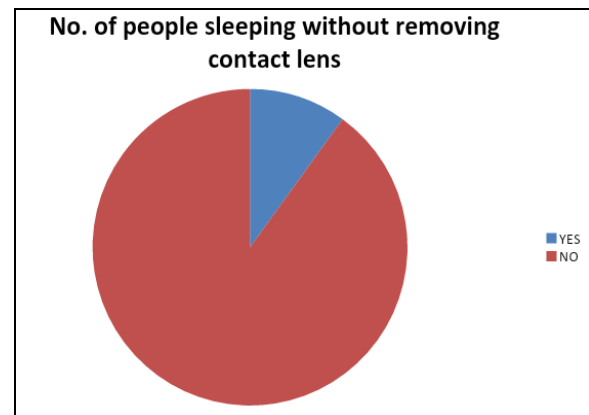


Fig. B4 Figure showing the no of people sleeping without removing contact lens

Figure B5 graph and figure B6 graph showing complications occurring due to Wearing contact lens and reasons for the complications occurring due to wearing contact lens.

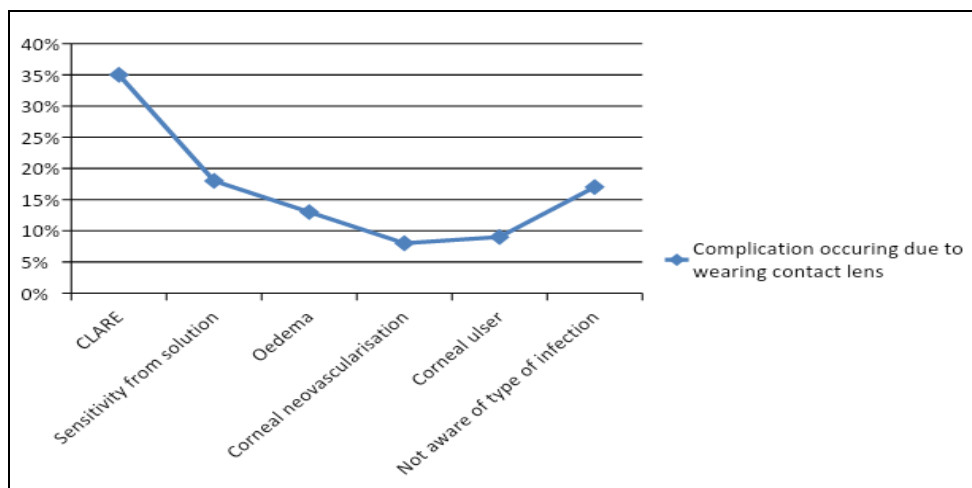


Fig. B5 Graph showing complications occurring due to wearing contact lens

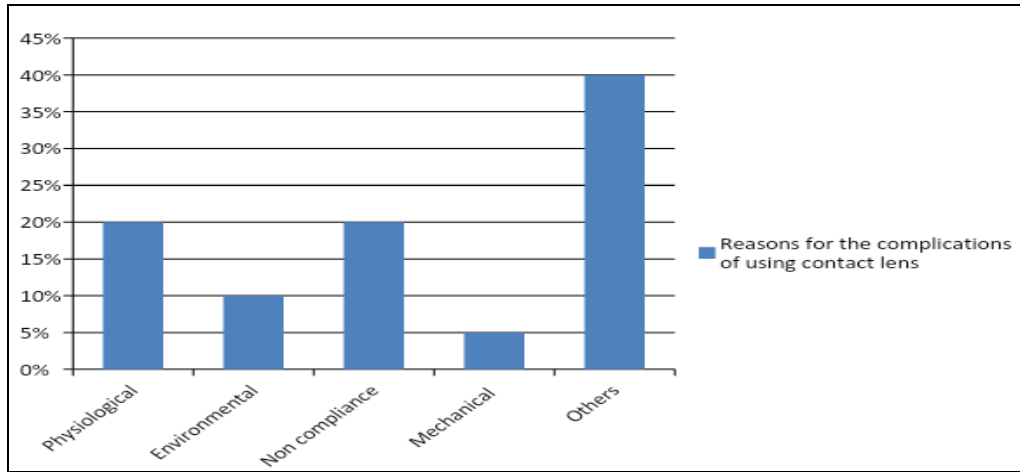


Fig B6 Graph showing the reasons of complications occurring due to wearing contact lens.

**Section C:**

Out of 300 there are 200 people (66.66) who never use contact lens. Figure C1 graph showing different reasons for not wearing the contact lens. 8 people (8%) thinking that it's not easy to wear, 7 people (7%) think that contact lens get stuck behind the eyes, 30 people (30%) are thinking that contact lens are uncomfortable to wear, 2 people (2%) think that contact lens can get

permanent stuck on the eyes, 10 people (10%) think that contact lens are too much trouble to take care of, 12 people (12%) people think that contact lens can pop out of the eye , 8 people (8%) thinks that contact lens caused eye problems, 7people (7%) think that I will never able to put the contact lens in eyes, 15 people (15%) think that contact lens are too expensive, whereas 1 people (1%) think that it's not needed.

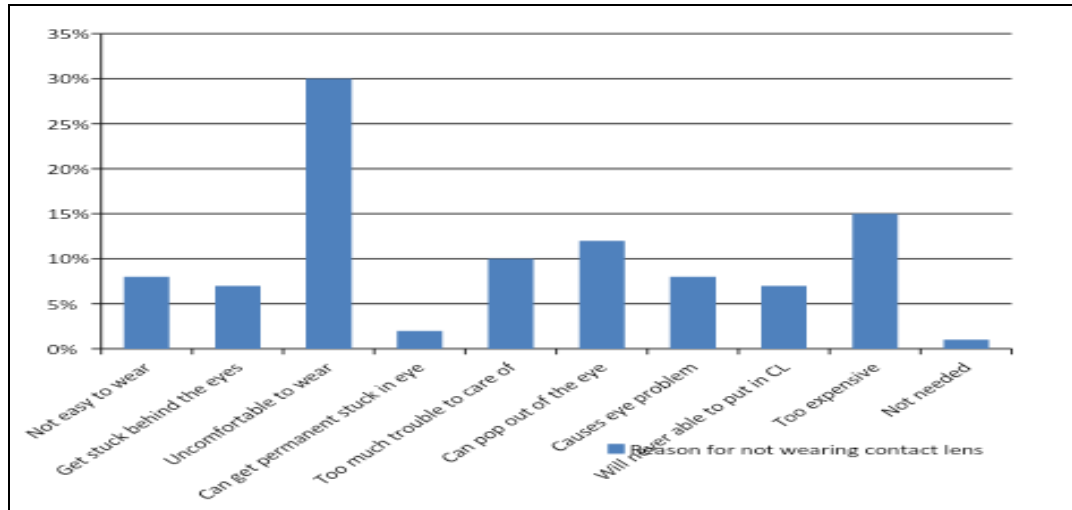


Fig. C1 Graph showing different reasons of not wearing the contact lens

**DISCUSSION**

The conducted study showed that people have so many misconceptions about contact lens in their minds. Among all the participants there is only 32% of people uses contact lens whereas other uses glasses for refractive error correction.

The groups of people who prefer glasses over contact lens are not correct and

relevant information about contact lens, because their source of information is their social circle. Most of the people in this category think that using contact lens can be difficult and can cause eye infection whereas the fact is contact lenses are easy and safe to use. Some people have a misconception that contact lens gets stuck in their eye but the fact is, if the person is



following the advice of a doctor about the proper wear, care, and removal of contact lens then it can be used gently. It never sucks in the eye.

There is a myth among some people that contact lens is uncomfortable to carry but modern contact lenses are thin and soft making them very comfortable. Contact lens never pops out of the eye suddenly and is easy to carry. It can be used by all age groups. They are also not very expensive and can be carried by everyone simply. So, in this study the educated people with so many misconceptions about the contact lens took part. These people avoid using the contact lens and also suggest the same to other people.

The most important step is to remove these myths about contact lenses is to increase awareness about the contact lens among people and these can only be done by providing the correct and relevant information about the contact lens.

## **CONCLUSION**

The study is helpful in addressing the gaps in knowledge, attitude, and use of Contact lenses among people. Everyone who participated in this survey was well educated but they possess so many misconceptions regarding contact lens due to which they avoid the use of Contact lens because they even never tried Contact lens before and also suggest the same to others. Misconceptions like uncomfortable to wear, contact lens can get stuck in the eye, trouble in taking care, not easy to wear, can pop out of the eye, can cause eye problems, and contact lens are too expensive are there in their mind. These misconceptions are in their mind due to the wrong information they receive from their friend and social circle which is irrelevant sources of their information.

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**Conflict of Interest:** None

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## **REFERENCES**

1. HOM M.M, Bruce A. S.(eds), 2006 manual of contact lens prescribing and fitting with CD ROM, 3rd edition, Butterworth-Heinemann Elsevier , st. louis, USA.
2. Uedagankashimonosekishi. Contact lens use among high- school students. ophthalmology (japan) 2001; 43:293-7.(Google scholar)
3. Lee yc, Lim cw, samsm, kohD. The prevalence and pattern of contact lens use in a Singapore community.Claoj.2000; 26:21-5 (pubmed) (Google scholar)
4. Colleen R, Robin L.C. Survey of contact lens wearing habits and attitude towards methods of refractive correction; 2002 versus 2004.optomvis science 2005; 82:555-61.
5. Roth HW. Contact lens complication. Etiology, pathogenesis, prevention, therapy. Thieme New-York, 2003.
6. Contact lenses. In cantor L.B, Ropuano CJ, cioffi GA. clinical optics. Basic and clinical science course. American Academy of ophthalmology.
7. Lee yc, Lim Cw, Saw SM, koh D. The prevalence and pattern of contact lens use in a Singapore community. CLAOJ.2000 jan; 26(1):21-5
8. Alan R, Andrew JR. Contact lens material update: options for most prescriptions. Contact lens spectrum (serial on the internet) 2005 March 20: (about3p.)
9. Palamar M, Masarogullari M, Egrilmez s, Ayedemir s, yagci A, microbikkontakt lens keratitlerinidemikrobiyolosikinceumesonucl arimiz Turk J ophthalmol.2010; 40:349-353.(Google scholar)
10. Sengor T, kuranaSA, Altun A, Irkec M, Aki sf, Aksoy s.contact lens related Acanthamoeba keratitis and accompanying Dacryoadenitis. Eye contact lens 2015; 41;204-209.(pubmed) (Google scholar)
11. Saver A, meyer N, Bourcier T; French study group for contact lens related microbial kerritis. Risk factors for contact lens related microbial keratitis: A case control multicentre study. Eye contact lens 2016; 42:158-162(pubmed) (Google scholar)
12. Dinc E, yildirimo ,Altiparmak G, Adiguel u, Temel G. A major public health problem: uncontrolled wearing of contact lenses. Turk jophthalmol.2012;42:84-87. (Google scholar).
13. Sundu c, DincE, sari AA, yildirim o, Temel GO, uncontrolled selling of contact lenses.

- Turk J ophthalmol.2015; 3: 102-104(Google scholar )
14. Donshik pc, ehlerswH , Anderson L.D., suchecki . J.k. strategies to better engage , educate and empower patient compliance and safe lens wear: compliance: what we know, what we don't know, and what we need to know. Eye contact lens 2007;33: 430-433.(pubmed)(Google scholar).
15. Wuy,carntN,Stapletonf. contact lens user profile, altitudes and level of compliance to lens care. Contact lens anterior eye. 2010; 33:183-188.(pubmed) (Google scholar)
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