



# “Comparative Evaluation Of Eye Donation Awareness Among General Population And Medical Persons”

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## ABSTRACT:-

The aim of the study was to compare the evaluation of eye donation awareness among the general population and medical persons, and the results showed that medical students had higher awareness regarding eye donation compared to non-medical students, with both awareness and willingness being better among medicos than non-medicos. Although awareness regarding eye donation was satisfactory, most participants in both groups were not willing to donate their eyes. Most respondents knew that eyes can be donated only after death, but only 30% of non-medical students were willing to donate, mainly due to lack of awareness. More than half of the participants were unaware that eye removal can be done at the donor's home, and most students expressed willingness to help spread awareness about eye donation.

**Key words:-** Eye donation ,Awareness ,donate eyes ,Medical and non-medical students

## INTRODUCTION

The eyes are one of the major sensory organs of life. A world without vision is a grim prospect. There is a myth that there is a whole eye transplantation but there is no whole eye transplantation, only corneal tissue is recovered for transplantation.[1]

THERE IS ONLY ONE WAY TO  
LIVE AFTER YOUR DEATH  
**DONATE YOUR  
EYES**



Eye donation is an act of donating one's eyes after his/her death. It is an act of charity, purely for the benefit of society and is totally voluntary. The eye donation of the deceased can be authorized by the next of kith & kin even if the deceased did not pledge to donate his / her eyes before death. Age or systemic illness such as diabetes or hypertension, heart disease, or kidney disease is not a barrier to eye donation. The corneas of a person are unaffected even if they have undergone any eye surgeries in the past and hence will be useful and can be transplanted in others. The Cornea is the clear tissue covering the front of the eye. It is a focusing element of the eye. The vision is dramatically reduced or lost if the cornea becomes cloudy. This loss of vision is referred to as corneal blindness. Several corneal diseases affect children and adults and can affect both eyes making them blind.[2]

When the eye is affected only by corneal diseases, replacing this part will restore the vision in such people. According to World Health Organization (WHO) estimates, every 5 seconds, someone goes blind. There are currently about 45 million blind people in the world which increases by 1–2 million every year. Damage to the cornea is the second most common cause of visual impairment and blindness which accounts for about 6–8 million of the total blind cases in the world. The majority of blinding corneal damage in the form of trachoma affects 4.9 million individuals. Other major causes include ocular trauma, ulceration, xerophthalmia, ophthalmia neonatorum, onchocerciasis, leprosy, and the use of traditional eye medicines. [3]

Programme for Control of Blindness (NPCB) estimated that there are currently 120,000 corneal blind persons in India and every year, there is an additional 25,000–30,000 cases of corneal blindness. National A major treatment option for restoring sight in those with corneal blindness is through corneal transplantation which can only be accomplished through cornea donation. Presently in India, the donor eye collection is around 22,000 eyes every year, which is insignificant with respect to the requirement. Therefore, the collection of the donor's eyes is a priority in any organized effort to alleviate corneal blindness. The establishment of eye banks is implemented in the success of corneal transplants. [4]

This study was therefore designed to assess the awareness and knowledge among students in medical and non-medical populations. These populations are considered because well-motivated populations can motivate the public very well.

To find the knowledge of the general population and increase the awareness among the general population, so eye donation can help to give a positive impact.

Eye donation is a noble and humanitarian act that helps restore vision to people suffering from corneal blindness. Corneal blindness is one of the major causes of visual impairment worldwide and can significantly affect the quality of life, productivity, and social independence of an individual. Unlike many other causes of blindness, corneal blindness is largely preventable and treatable through timely corneal transplantation using donated eyes.

The cornea is the transparent front part of the eye that plays a vital role in focusing light and enabling clear vision. Damage to the cornea due to infections, injuries, degenerative conditions, or congenital disorders can lead to severe visual loss. In such cases, corneal transplantation remains the most effective treatment option. However, the success of this procedure depends entirely on the availability of donated eyes.

Eye donation refers to the process in which a person voluntarily donates his or her eyes after death for therapeutic purposes, mainly for corneal transplantation. The donated corneal tissue is collected by trained personnel and preserved in an eye bank, where it is evaluated and later supplied for transplantation. A single donor can help restore vision in two individuals. Despite advances in medical science and eye banking facilities, the demand for donor corneas continues to exceed the supply, especially in developing countries like India.

Lack of awareness, misconceptions, fear, and cultural beliefs are commonly reported barriers to eye donation. Many people are unaware of the correct procedure, the appropriate time for eye retrieval after death, and the role of eye banks. Some individuals believe that eye donation may disfigure the body or affect religious practices, which further reduces willingness to donate. In reality, eye donation does not delay funeral procedures and does not cause facial disfigurement.

Students, especially those pursuing medical and allied health sciences, are future healthcare providers and play an important role in educating the community. Their level of awareness and attitude towards eye donation can strongly influence public perception and acceptance. Non-medical students also represent an important segment of the educated population and can act as effective messengers in spreading awareness.

Assessing the knowledge, awareness and willingness regarding eye donation among both medical and non-medical students is therefore essential to identify existing gaps and misconceptions. Understanding these factors can help in designing targeted educational programmes and awareness campaigns aimed at improving eye donation rates

## Review of Literature

A retrospective observational study published in 2018 March 7 named “**Awareness and knowledge on eye donation among allied health sciences, a medical and nursing student in Goa**” done by Barsha Lal, Ugam Usgaokar, Harshada Narvekar, Dinesh Venugopal underwent a cross-sectional descriptive study that was conducted using a standard predesigned and pretested closed-ended structured questionnaire based on eye donation to obtain information about awareness and knowledge from AHS, medical, and nursing students of Goa. Three hundred and forty participants participated in the study. The majority of the participants [97.9% (95% CI: 95.8-99.2)] were aware of the existence of eye donation. Mass media (62.9%) was the foremost source of information. However, only 145 [42.6% (95% CI: 37.3-48.1)] participants were willing to donate their eyes. AHS, medical, and nursing students stood apart significantly in their awareness and knowledge. Only 60 [17.6% (95% CI: 13.7-22.1)] participants were aware that the whole eye can be removed from the donor while 215 [63.2% (95% CI: 57.9-68.4)] were wrongly aware that the cornea can be removed separately. Awareness about eye donation was not associated with willingness to donate eyes.[5]

In another similar study which was published on 2022 September 30 “**Knowledge, awareness and attitude of eye donation among the non-clinical staff of a tertiary eye hospital in South India**” done by Vekatapathy Narendran, Sivakumar Padmavathi, Shanmugam Sangheetha, Natrajan Karthik did study in which they used a method in which an online cross-sectional study was conducted among the non-clinical staff from all centers of a tertiary eye care hospital across Tamil Nadu. The quiz link was emailed to the non-clinical staff of all the centers. On completion of the quiz, the participants viewed their respective scores and the correct answers to all questions. This activity was presumed to subsequently improve their knowledge and clear up the myths about eye donation. Two hundred twenty-eight non-clinical staff from 11 hospitals participated in the quiz. The mean age was  $35.3 \pm 9.8$  years and 130 were female staff (57.05%). One hundred eighty-one participants (79.39%) scored over 50% of the total 17 queries. One hundred eighty-six (81.58%) and 142 (62.28%) participants scored over 50% in the awareness section and knowledge section, respectively. Eye bank volunteers (73, 32.02%) were the main source of information. Twenty-four (10.53%) had already taken the pledge for eye donation and 175 (76.75%) were willing to pledge, 29 (12.72%) were not willing to pledge. Twenty-two out of these 29 (75.86%) had no specific reason for not pledging. Family, religious reasons, lack of clarity, and fear were the least cited reasons (13.79%).[6]

A similar study which was published on 2009 March 1 named “**Awareness and knowledge on eye donation among university students**” done by M K Bharti (MBBS), S C Reddy (M.opthl), Tajunisah (M.opthl) suggested that Out of 400 students assessed, there were 103 medical, 82 dental, 83 laboratory technology, 50 pharmacy, 48 biomedical and 34 bioengineering students, all of whom were 20 years of age and in the first year of their degree course. They represented 60.2%, 94.2%, 92.2%, 100%, 92.3%, and 75.5% of the total number of students of the respective degree.[7]

**TOOLS REQUIRED:-**

- PERFORMA- questionnaire
- TYPE OF STUDY- descriptive
- PLACE OF STUDY – Integral university, Lucknow
- APPROX SAMPLE SIZE- approx 60

**INCLUSION CRITERIA:-**

- Adults aged between 18-25 years.
- Adults belong to medical courses.
- Adults belong to the general population.

**EXCLUSION CRITERIA:-**

- Unwilling adults.
- old-age.
- Adults belong to outside of the university

**METHODOLOGY**

A cross-sectional descriptive study was conducted at Integral University, Lucknow, during the period from April to June 2023 to assess the awareness, knowledge and willingness regarding eye donation among medical and non-medical students.

The medical group included students pursuing MBBS, Bachelor of Optometry, Bachelor of Physiotherapy, Pharm-D and Nursing courses. The non-medical group comprised students enrolled in BA English, BBA, Biosciences, Biotechnology, BSc Agriculture, BSc Physics, B.Tech, MBA and M.Tech programmes.

A total of 60 students constituted the study sample, including 30 medical students (medicos) and 30 non-medical students (non-medicos). The study population was selected using a convenient sampling method, and participation was entirely voluntary. Prior to data collection, the purpose of the study was explained to all participants and their consent was obtained. Confidentiality of the responses was maintained throughout the study.

Data were collected using a self-administered, conventional, pre-designed and pre-tested, closed-ended structured questionnaire. The questionnaire was designed to assess the participants' degree of awareness, knowledge and comprehension regarding eye donation, as well as their willingness to donate their eyes. All questions were objective in nature and participants were instructed to select only one most appropriate answer for each item.

The questionnaire was adapted and modified from a previously published survey available on ScienceDirect.com. It included questions related to willingness to donate eyes, general awareness about eye donation, the appropriate time period for eye donation after death, the place where eye donation can be carried out, knowledge of any person who had donated his or her eyes, and awareness regarding the existence and role of eye banks. The collected data were subsequently compiled and analysed to compare the level of awareness and attitudes towards eye donation between medical and non-medical students.



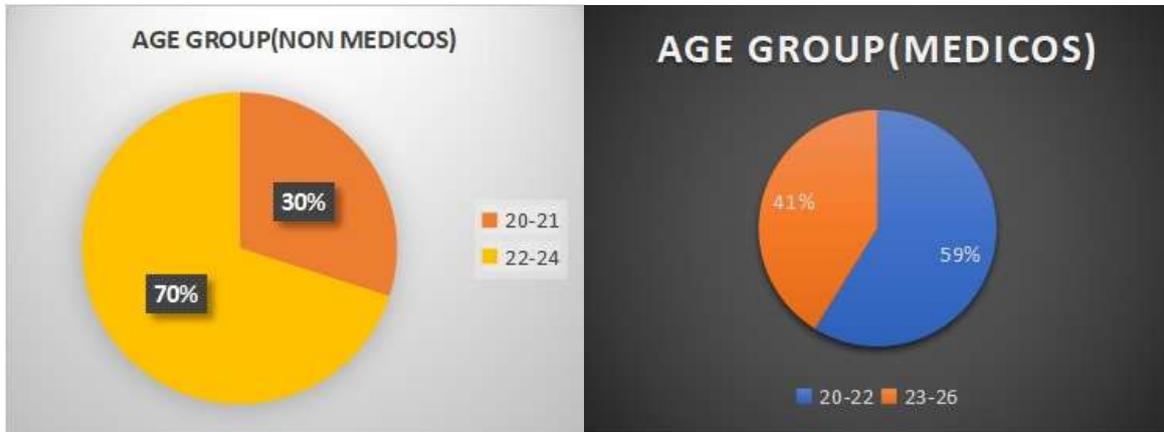
**FIG: Explaining about Eye Donation**



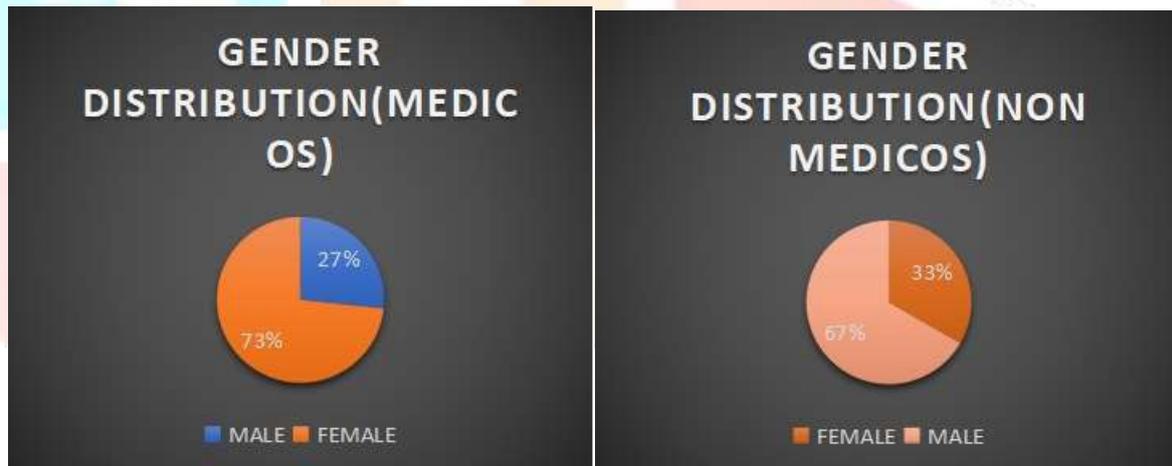
**RESULT AND ANALYSIS**

There were 60 participants in this study. The response rate was 100%, however, there were different responses from each and every group.

Comparison between participants and the source population characteristics in terms of sex, age, and field of study is shown in Fig 1

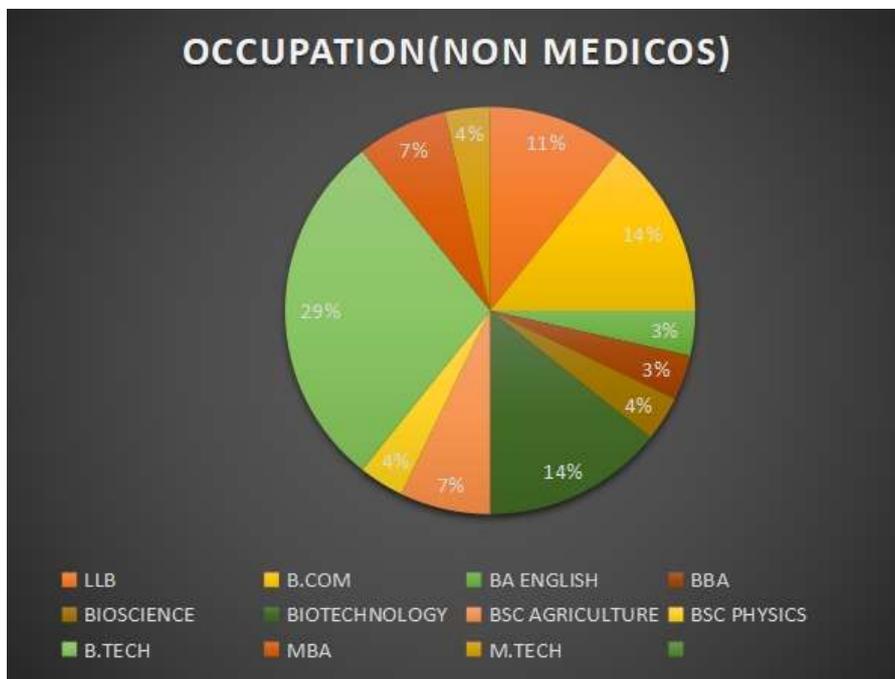


**Fig:-Comparison between participants and the source population characteristics in terms of sex, age, and field of study**



**Fig:-gender distribution**

There were 73% of female participants in medicos and 27% were male, while in non-medicos there were 33% of female and 67% of male.



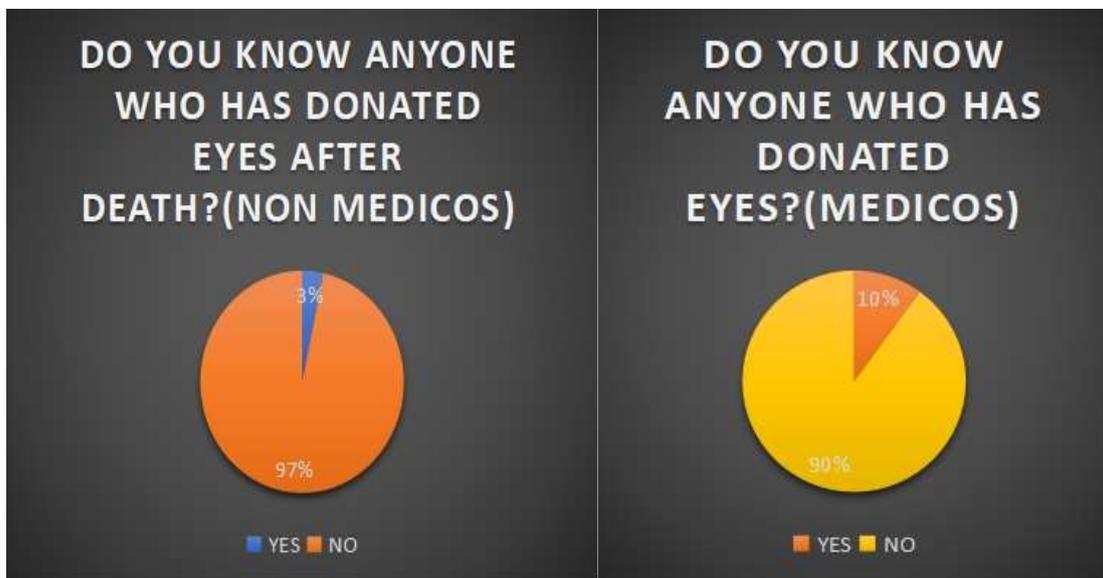
**Fig:-occupation**

In non medicos, there were 29% of participants of English honors. Which was a highly participated group in this study. And 14% of biotechnology and bsc. physics were the second most participants in this study.



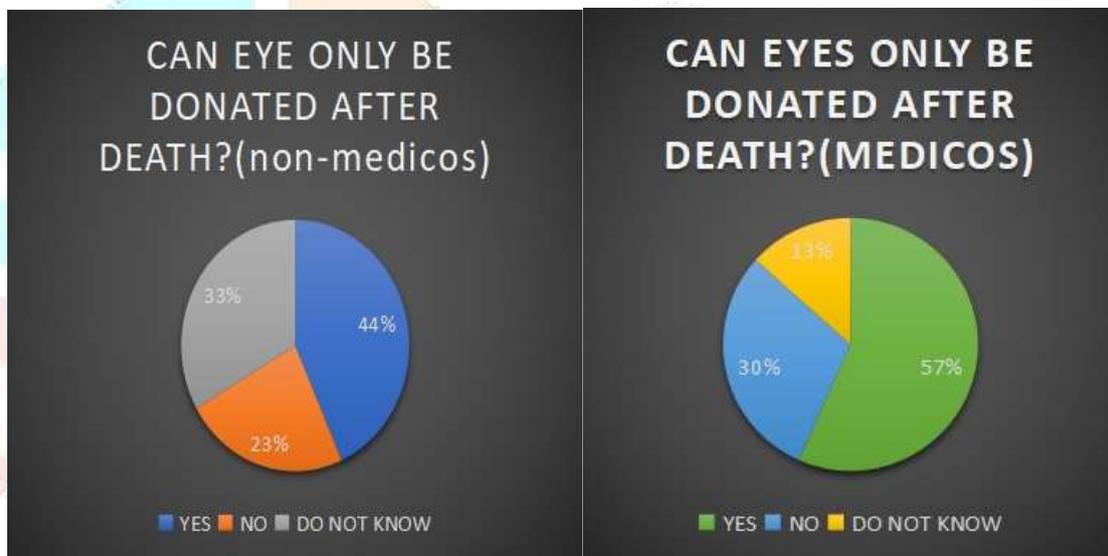
**Fig:-question no.1**

90% of participants were knowing about eye donation in the non-medicos group. While in the medicos group, 97% of participants were knowing about eye donation.



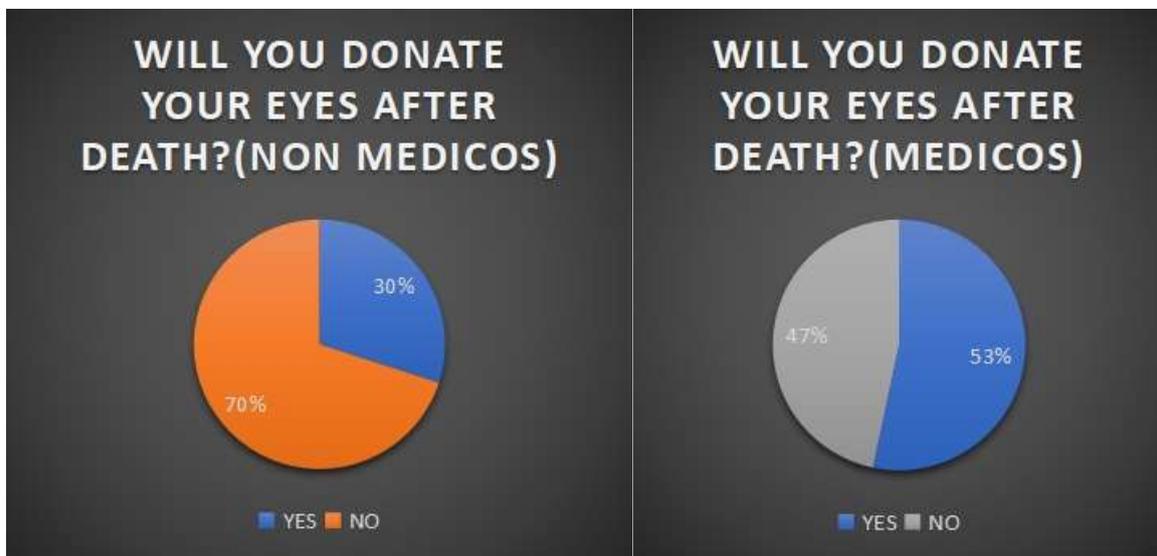
**Fig:-question no.2**

Only 3% of non-medical participants are aware of someone who has given eyes after death, compared to 10% of participants who are medical.



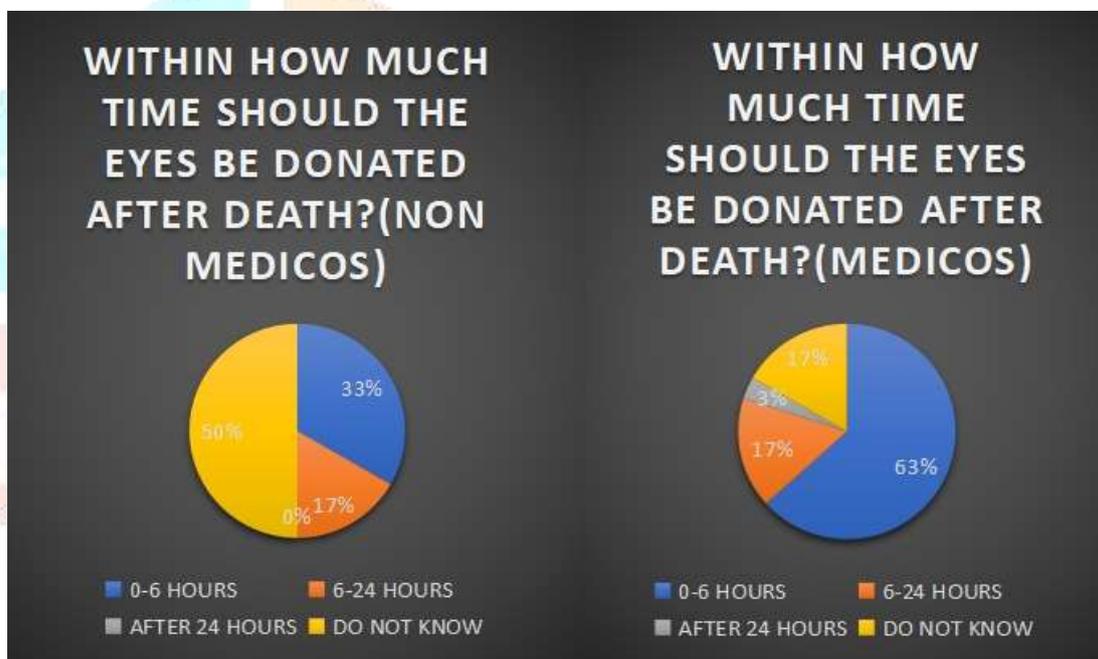
**Fig:-question no.3**

In this study, 23% of participants were not knowing whether eyes are donated after death or not in the non-medicos group while in the medicos only 30% of participants were not knowing the answers to this question.



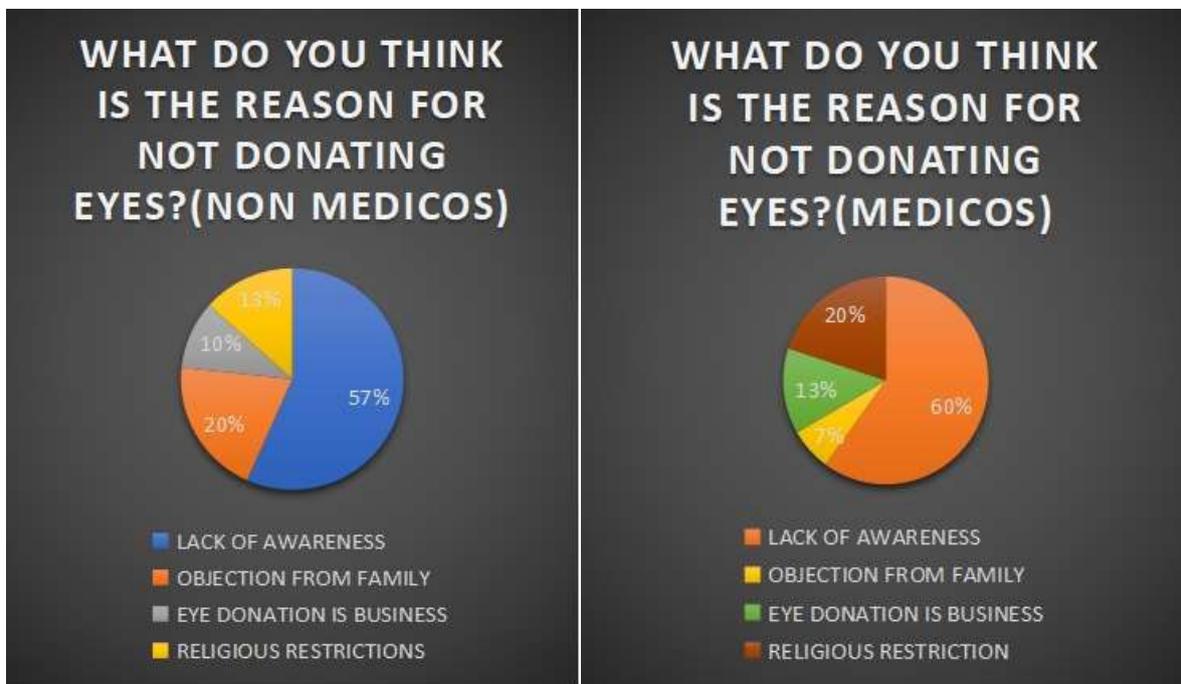
**Fig:-question no.4**

In the non-medicos group, 30% of participants were interested in donating their eyes after death while in the medicos group, 53% participants were interested in donating their eyes after death



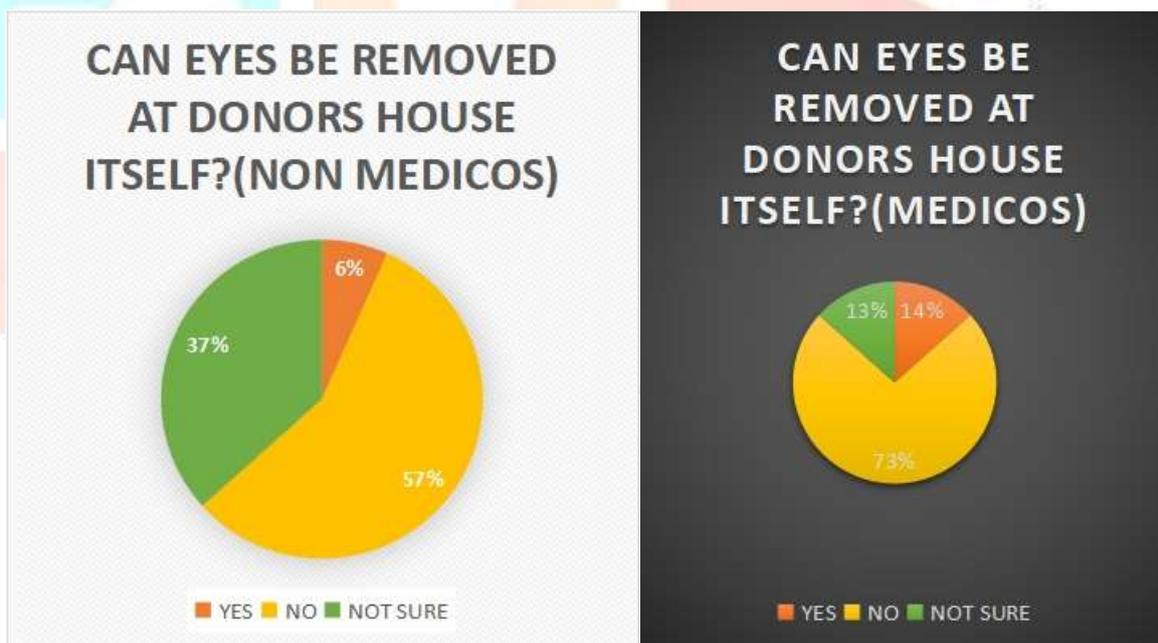
**Fig:-question no.5**

In the non-medicos group, 50% of participants were not knowing about within how much time should the eyes be donated after death while in the medicos only 17% of participants were knowing answered this question.



**Fig:-question no.6**

This was the most important question asked by the participants, in non-medicos about 57% of survey respondents said that a lack of knowledge was the primary barrier to eye donation while in the medicos group, 60% of survey respondents said that a lack of knowledge was the primary barrier to eye donation.



**Fig:-question no.7**

When asked if eyes could be donated in donors' homes, 73% of survey respondents responded no, compared to 56% of non-medical respondents who disagreed.

Although it is a relatively straightforward process, neither the medical community nor the general public are aware that the eye may be removed in the donor's home.

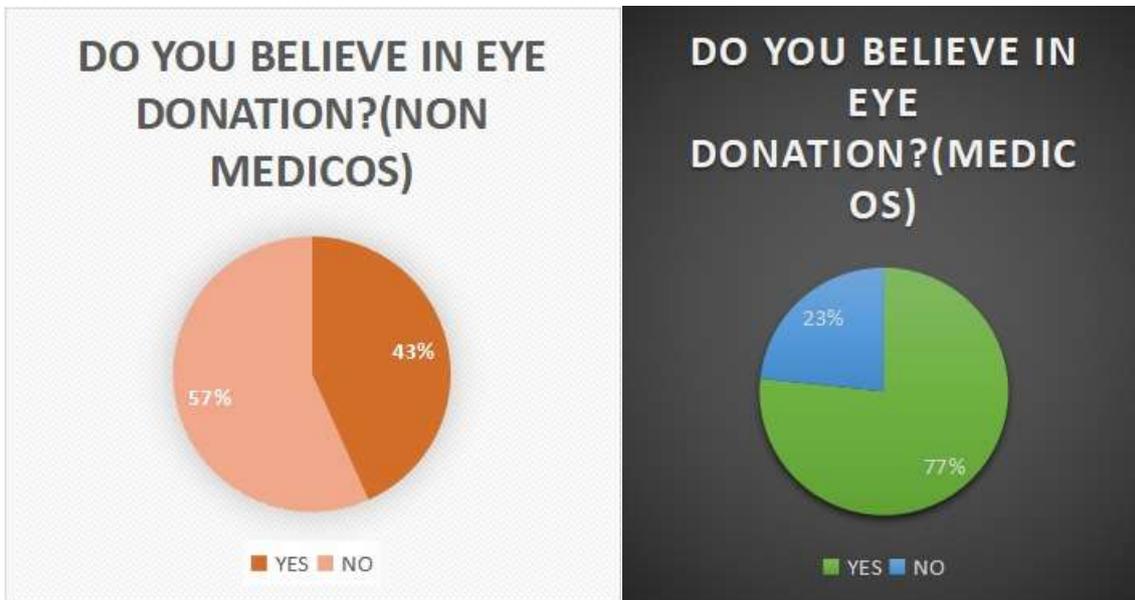


Fig:-question no.8

In the non-medico group, 57% of individuals support eye donation, but in the medico group, 77% support it.

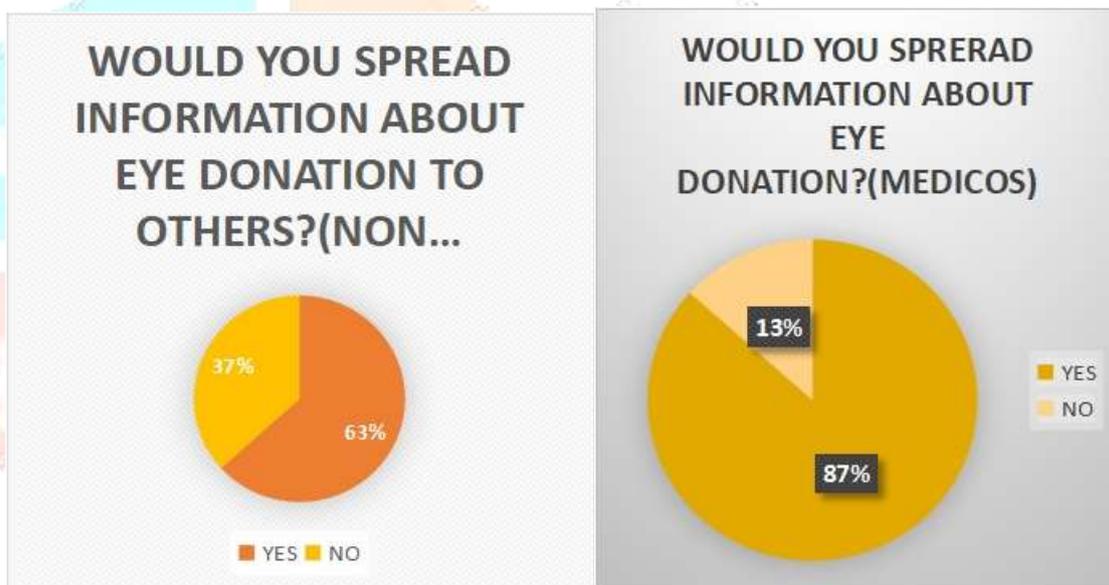
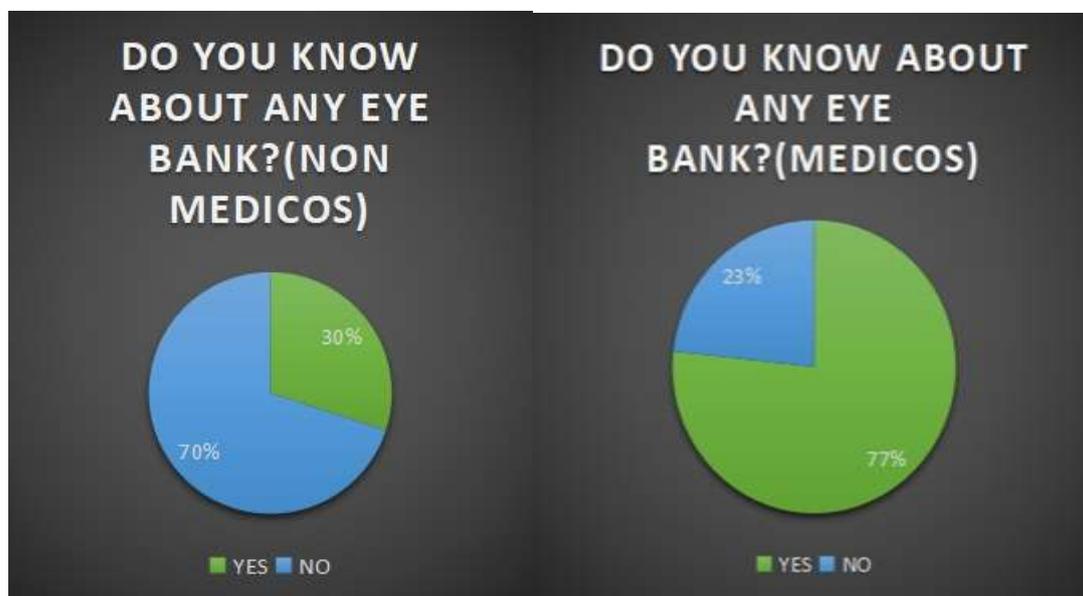


Fig:-question no.9

In the medico group, 87% of participants were not interested in spreading awareness/information on eye donation while in non-medicos only 37% of participants were not interested in it.



**Fig:-question no.10**

About 30% of participants in non-medicos were knowing about eye banks while 77% of participants in medicos were knowing about eye banks.

## **DISCUSSION**

As women are now represented in all fields of endeavor and are more active than men, there were 70% of female participants in this study.

In this study, 3% of non-medical participants and 10% of medical participants knew someone who had donated their eye in their personal lives.

The majority of the participants were knowing about the existence of eye donation in this study.

Medical students' willingness to donate their eye ranged from 9% to 88% for Indian courses and from 13% to 94% for international studies. Only 42.6% of the students in this research were willing to donate their eyes, though. These high percentages in the small number of trials are encouraging since motivated students are more likely to persuade others to give their eyes. The majority of responders cited "Eye donation is noble work" as the justification for their readiness to donate eyes. People were thought to refrain from giving eyes mostly due to a dislike of having their eyes cut out from their bodies and a lack of knowledge.

Small sample sizes were used in this study, although high sample sizes were normally used for this sort of descriptive research. It was a challenging task to collect each and every response from participants as it was offline mode. Both groups show the least interest in participating.

## CONCLUSION

Although awareness regarding eye donation was satisfactory. But most of the participants were not interested in donating their eyes in both groups. In this study, most of the participants said that the eyes can be donated only after death. This was shocking that in non-medico only 30% of participants were interested in donating their eyes it may be because of a lack of awareness among them. In this study, only most of the participants said that lack of awareness was the main reason for not donating eyes.

56% of participants in non-medicos said no to the question that the eye can be removed at the donor's house while 76% in medico said no to this question.

Most of the participants were ready to spread awareness of eye donation.

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**Place:-Integral University, Lucknow**

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