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ORIGINAL ARTICLE

Knowledge, Willingness and Barriers Regarding Eye Donation Among Adult Population in a Selected Rural Community, Coimbatore: A Cross-Sectional Study

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ABSTRACT

Background: Eye donation is a vital public health intervention for addressing corneal blindness, yet donation rates remain suboptimal, particularly in rural communities. Understanding the knowledge, willingness, and barriers among adults is essential for designing effective awareness strategies.

Methods: A cross-sectional study was conducted in a selected rural community of Coimbatore to assess knowledge, willingness, and barriers related to eye donation among adults. A total of 150 participants aged 18–60 years were recruited using a non-probability convenient sampling technique. Data were collected through a structured questionnaire and analysed using descriptive and inferential statistics

Results: Among the respondents, 89% demonstrated average knowledge, 9% had good knowledge, and 2% had poor knowledge regarding eye donation. Approximately 64% expressed willingness to donate their eyes, while 36% were unwilling. The most commonly reported barrier was family opposition (34%), followed by religious beliefs (12%). No statistically significant association was found between knowledge levels and selected demographic variables.

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Conclusion: The study reveals moderate levels of knowledge and willingness toward eye donation among rural adults, with family-related concerns and religious beliefs acting as key barriers. These findings underscore the need for targeted educational interventions and community engagement to enhance awareness and promote eye donation in rural settings.

KEYWORDS

• Eye donation • Knowledge • Awareness • Willingness • Barriers

INTRODUCTION

Vision is one of the most vital senses, and the loss of sight particularly due to corneal blindness can profoundly affect an individual's quality of life. Corneal transplantation remains the only restorative treatment for many forms of corneal opacity, yet the global shortage of donor corneas continues to hinder access to this life-changing procedure.[1,2] Eye donation, especially posthumous corneal donation, is a critical public health intervention that relies entirely on voluntary contributions from individuals and families.

Despite numerous awareness campaigns and advancements in eye banking infrastructure, the actual rate of eye donation remains disproportionately low compared to the need. This discrepancy raises important questions about the adult population's knowledge, willingness, and the barriers that prevent them from pledging or consenting to donate eyes. Understanding these factors is essential for designing targeted interventions that not only inform but also inspire action.[3,4]

This study aims to explore the level of knowledge regarding eye donation among adults, assess their willingness to donate, and identify the cultural, psychological, and logistical barriers that impede donation.[5] By analysing these dimensions, the research seeks to contribute to more effective strategies for increasing eye donation rates and ultimately reducing the burden of corneal blindness.

Need for the Study

Corneal blindness remains a significant public health challenge in India and globally, with thousands of individuals awaiting corneal transplants to regain sight. Despite the existence of eye banks and awareness campaigns, the actual number of eye donations falls drastically short of the demand.[6] This gap highlights a critical disconnect between public awareness and actionable willingness to donate.

Understanding the adult population's knowledge, attitudes, and perceived barriers is essential for bridging this divide. Adults often serve as key decision-makers in families and communities, and their beliefs and behaviours directly influence organ and tissue donation outcomes.[7] However, existing literature suggests that while many adults are aware of eye donation, misconceptions, cultural beliefs, and lack of procedural knowledge often prevent them from pledging or facilitating donation after death.[8,9]

In regions like Tamil Nadu, where healthcare infrastructure is relatively advanced, the low conversion rate from awareness to actual donation underscores the need for localized, evidence-based interventions. By exploring the specific factors that shape knowledge, willingness, and barriers among adults, this study can inform targeted educational strategies, policy enhancements, and community engagement efforts to increase eye donation rates .

Ultimately, the findings of this study will contribute to reducing preventable blindness and improving the quality of life for countless individuals awaiting corneal transplants.

OBJECTIVES

- To assess the level of knowledge, willingness, and barriers on eye donation among the adult population.
- To associate the knowledge on eye donation with selected demographic variables.
- To provide awareness regarding eye donation to the public.

LITERATURE REVIEW

Several studies have explored the knowledge, willingness, and barriers regarding eye donation among adult populations, revealing a consistent gap between awareness and actual

donation behaviour. Phukon and Jangid (2022), in their study conducted in Kamrup Metro, Assam, found that while 62.5% of adults had moderately adequate knowledge and 65% showed a moderately favourable attitude, only a small fraction demonstrated adequate understanding of the donation process. Similarly, Sinha *et al.* (2021) surveyed 1,100 individuals in North India and reported that although 80.2% were aware of eye donation, only 45.1% expressed willingness to donate, and less than half knew the ideal time for donation after death. In Southern India, Pallerla *et al.* (2022) studied 867 adults and found that 77.1% were aware of eye donation, but just 38.5% were willing to donate, with significant gaps in procedural knowledge and cultural concerns acting as barriers. Across these studies, common obstacles included fear of facial disfigurement, spiritual beliefs about rebirth, lack of family discussion, and uncertainty about how to initiate the donation process. These findings underscore the need for targeted educational interventions that not only raise awareness but also address myths, clarify procedures, and encourage open family communication to improve actual donation rates.

METHODOLOGY

Study design and setting: A descriptive cross-sectional study was conducted in a selected rural community in Coimbatore, Tamil Nadu, India.

Study population and sample size: The study included 150 adults aged between 18 and 60 years residing in the community. The sample size was determined based on convenience due to resource constraints.

Sampling technique: Non-probability convenience sampling was employed to recruit participants who were readily available and willing to participate during the study period.

Data collection tool & Procedure Data were collected using a structured questionnaire developed by the investigators. The questionnaire consisted of four sections: demographic variables, knowledge about the study topic, willingness to participate/ intervene, and perceived barriers. The tool was pre-tested for clarity and validity in a pilot study prior to the main data collection.

The researchers administered the questionnaire through face-to-face interviews, ensuring consistency and completeness of responses. Written informed consent was obtained from all participants before data collection.

Data analysis: Collected data were entered into Microsoft Excel and analysed using SPSS version 22. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarized the demographic and study variables. Inferential statistics were performed using the chi-square test to assess associations between categorical variables. A p-value < 0.05 was considered statistically significant.

Ethical considerations: Confidentiality and anonymity of participants were maintained throughout the study.

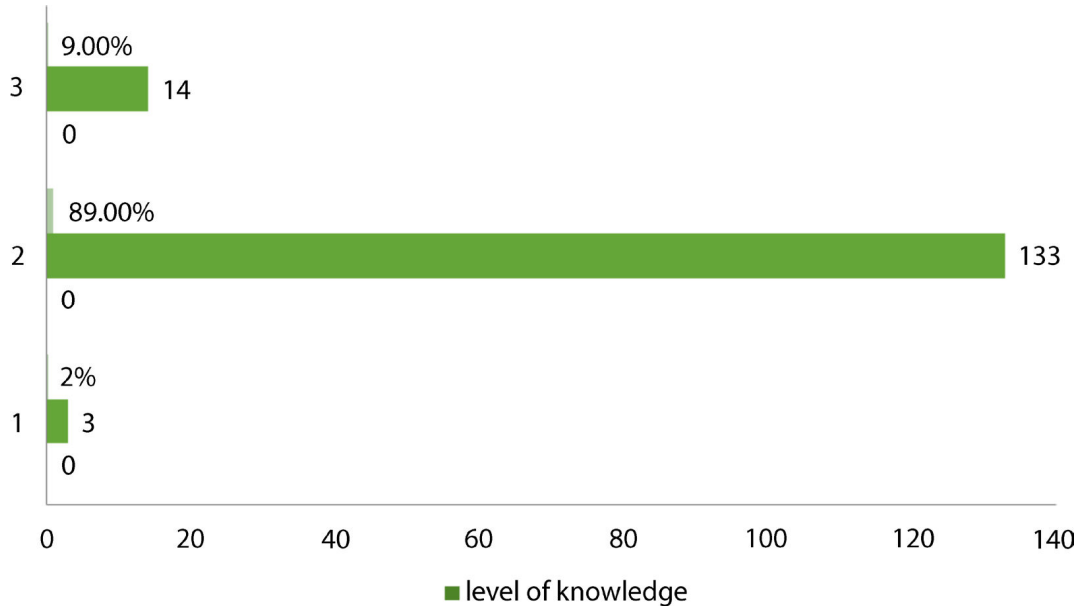

Figure 1: Distribution of respondent according to knowledge on eye donation

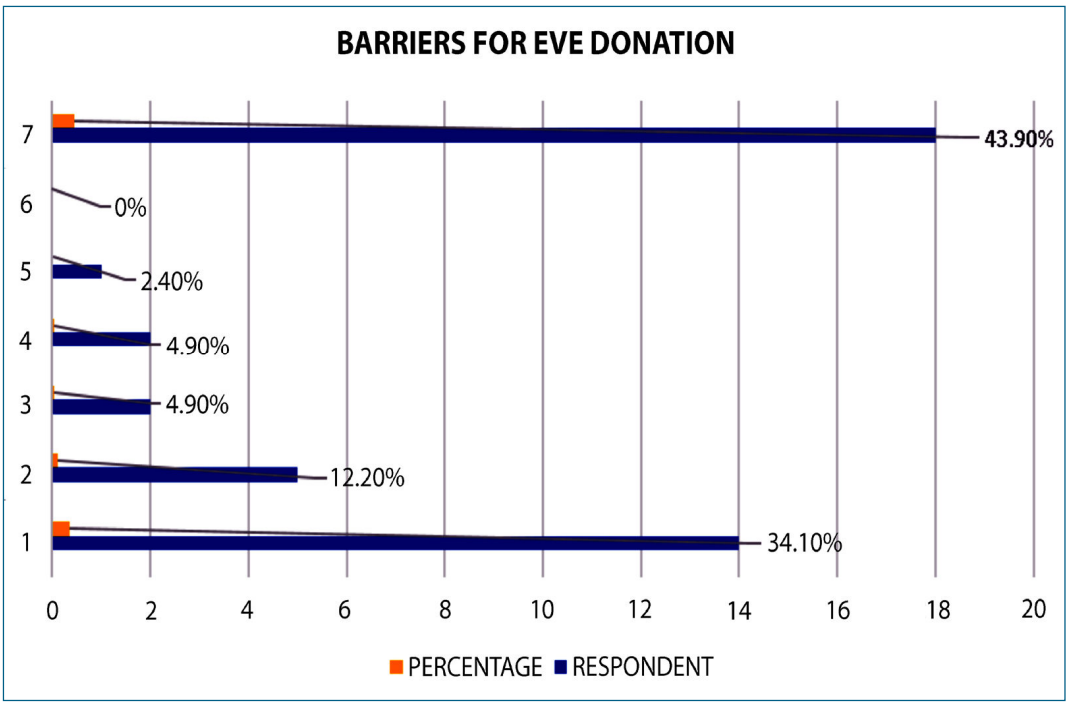

Figure 2: Distribution of respondent according to willingness on eye donation

The distribution on barriers of eye donation for 150 respondents.

For the question what would be your reason for not willing to donate your eyes, about 34% were responded as family opposition, about 12% were responded as religious belief, about 5% were responded as Complicate procedure, about 5% were responded as due to misuse of organ, about 2% were responded as affects the future, about 44% were responded as none of the above.

DISCUSSION

The findings of this study indicate that while the majority of respondents possessed average knowledge regarding eye donation, their willingness to donate remained comparatively lower.[10] This disparity suggests that awareness alone may not be sufficient to motivate individuals toward actual pledging or consent. Notably, family opposition emerged as the most significant barrier, followed by religious beliefs both of which reflect deeply rooted social and cultural influences. These factors highlight the importance of addressing not only informational gaps but also emotional and belief-based concerns through targeted interventions. Strengthening community-based education and fostering open dialogue within families may help mitigate these barriers.[11,12] Moreover, integrating eye donation awareness into broader public health efforts could enhance visibility and normalize the practice, particularly in rural settings where misconceptions are more prevalent.

RECOMMENDATIONS

- Conduct large-scale studies covering different populations.
- Implement awareness programs in rural communities.
- Integrate eye donation awareness into community health initiatives.
- Encourage healthcare professionals to act as motivators for eye donation.

CONCLUSION

The study concludes that despite moderate knowledge levels, willingness to donate eyes is hindered by socio-cultural barriers. Targeted awareness and family-inclusive interventions are crucial to increase eye donation rates in rural India.

Conflict of interest: There is no conflict of interest.

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