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EVALUATION OF A TECHNOLOGY-ASSISTED HEALTH EDUCATION PROGRAMME ON KNOWLEDGE AND ATTITUDE REGARDING EYE DONATION AMONG STUDENTS IN SELECTED COLLEGE, UTTAR PRADESH

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Abstract

Background: Eye donation is an important public health initiative that contributes to the management of corneal blindness and improvement of visual outcomes among individuals requiring corneal transplantation. Despite the availability of eye banking and corneal transplantation services, inadequate knowledge, misconceptions, and unfavourable attitudes may influence public participation in eye donation programmes. Technology-assisted health education, incorporating digital presentations, educational videos, animations, and interactive learning activities, may improve awareness and encourage positive attitudes among college students.

Objectives: To evaluate the effectiveness of a technology-assisted health education programme on knowledge and attitude regarding eye donation among students of S.S. College, Uttar Pradesh, and to determine the association between pre-test knowledge and attitude scores and selected demographic variables.

Materials and Methods: A quantitative pre-experimental one-group pre-test–post-test design is proposed. A total of 40 undergraduate students was selected using a non-probability convenience sampling technique. Data was collected using a structured knowledge questionnaire and a five-point Likert attitude scale. Following the pre-test, participants receive a structured technology-assisted health education programme. A post-test was conducted seven days after the intervention. Descriptive and inferential statistics was used for analysis.

Results: The example results show an increase in mean knowledge scores from 9.25 ± 3.10 during the pre-test to 17.80 ± 2.65 during the post-test. Similarly, the mean attitude score increased from 51.60 ± 8.40 to 74.25 ± 7.15. These hypothetical results demonstrate the proposed reporting format and do not establish intervention effectiveness.

Conclusion: Technology-assisted health education is a potentially useful approach for improving awareness and attitudes regarding eye donation among college students. The effectiveness of the programme in the setting determined through analysis of actual pre-test and post-test findings.

Introduction

Vision is one of the most important sensory functions, enabling individuals to perform daily activities, acquire knowledge, maintain independence, and participate effectively in social and professional life. Visual impairment and blindness continue to represent significant public health concerns worldwide, particularly in developing countries where access to specialized eye care services may be limited.

Corneal blindness is an important cause of visual impairment that can potentially be treated through corneal transplantation in appropriately selected patients. Corneal transplantation involves replacing diseased or damaged corneal tissue with healthy donor tissue. The availability of suitable donor corneas is therefore essential for providing effective treatment to individuals with corneal disorders.

Eye donation refers to the voluntary donation of eyes or corneal tissue after death for transplantation, research, or educational purposes, according to applicable clinical and legal requirements. Eye donation programmes depend on public awareness, family consent where required, effective coordination with eye banks, and timely retrieval of suitable donor tissue.

In India, efforts to promote eye donation have been undertaken through government initiatives, healthcare institutions, eye banks, voluntary organizations, and community awareness campaigns. However, inadequate knowledge, misconceptions, and negative attitudes may continue to influence willingness to donate.

Young adults and college students constitute an important population for promoting eye donation awareness. Students are often exposed to digital technology, social media, educational applications, and online learning resources. They may also serve as influential members of their families and communities by sharing accurate health-related information.

Technology-assisted health education is an innovative teaching approach that incorporates digital presentations, audiovisual materials, animated educational content, interactive quizzes, and online learning resources. These methods can present information in an engaging and accessible manner, potentially improving knowledge retention and encouraging positive attitudes.

Compared with conventional teaching methods, technology-assisted education may offer opportunities for repeated learning, visual explanation of complex concepts, and active learner participation.

Nursing professionals play an important role in promoting awareness regarding eye donation through educational interventions, counselling, community participation, and health promotion activities. Nurse-led technology-assisted education may be particularly suitable for college students because of their familiarity with digital learning environments.

Therefore, the present study proposes to evaluate the effectiveness of a Technology-Assisted Health Education Programme on knowledge and attitude regarding eye donation among students of S.S. College, Uttar Pradesh.

Need for the Study

Corneal blindness is an important cause of visual disability that may affect educational opportunities, employment, independence, and quality of life. Corneal transplantation offers the possibility of restoring useful vision in selected patients; however, transplantation services require a reliable supply of suitable donor tissue.

Public participation in eye donation programmes is influenced by awareness, personal beliefs, cultural practices, family attitudes, and access to accurate information.

College students may possess general awareness of eye donation but may lack detailed knowledge regarding eligibility, donation procedures, consent, the role of eye banks, and the importance of communicating donation wishes to family members.

Misconceptions about eye donation may create unnecessary fear and hesitation. Structured educational interventions can address these concerns by providing reliable information and encouraging informed decision-making.

Technology-assisted education is particularly relevant in contemporary higher education because students are increasingly familiar with smartphones, digital presentations, educational videos, and interactive learning platforms.

The study helps determine whether a structured technology-assisted programme can improve knowledge and attitudes towards eye donation among students of S.S. College, Uttar Pradesh.

Objectives of the Study

1. To assess the pre-test level of knowledge regarding eye donation among students of S.S. College, Uttar Pradesh.
2. To assess the pre-test attitude regarding eye donation among students.

3. To evaluate the effectiveness of a Technology-Assisted Health Education Programme on knowledge regarding eye donation by comparing pre-test and post-test scores.
4. To determine the effectiveness of the Technology-Assisted Health Education Programme on attitude regarding eye donation by comparing pre-test and post-test scores.
5. To assess the relationship between knowledge and attitude regarding eye donation among students.
6. To determine the association between pre-test knowledge and attitude scores and selected demographic variables.

Research Hypotheses

The following hypotheses will be tested at the 0.05 level of significance.

H1: There will be a statistically significant difference between the mean pre-test and post-test knowledge scores regarding eye donation among students.

H2: There will be a statistically significant difference between the mean pre-test and post-test attitude scores regarding eye donation among students.

H3: There will be a statistically significant correlation between knowledge and attitude scores regarding eye donation among students.

H4: There will be a statistically significant association between selected demographic variables and pre-test knowledge and attitude scores.

Materials and Methods

Research Approach

A quantitative evaluative research approach was adopted.

Research Design

A pre-experimental one-group pre-test–post-test research design was used.

Research Setting

The study was conducted at S.S. College, Uttar Pradesh, after obtaining permission from the concerned institutional authorities.

Population

The target population comprise undergraduate students studying in colleges of Uttar Pradesh.

The accessible population include students enrolled at S.S. College during the data collection period.

Sample Size

A total of 40 students were included in the study.

Sampling Technique

A non-probability convenience sampling technique was used.

Description of the Research Tool

The research instrument consists of three sections.

Section A: Demographic Variables

Age, gender, educational stream, year of study, place of residence, previous awareness regarding eye donation, and sources of information.

Section B: Structured Knowledge Questionnaire

A proposed 25-item questionnaire assess knowledge regarding eye donation, corneal blindness, eligibility, donation procedures, consent, eye banking, and common misconceptions.

Section C: Attitude Scale

A proposed 20-item, five-point Likert scale assess attitudes regarding eye donation. Scores range from 20 to 100 after reverse-scoring negatively worded statements.

Results

Table 1: Frequency and Percentage Distribution of Demographic Characteristics (N = 40)

Demographic Variable	Frequency	Percentage
Age (years)		
18–20	24	60.0%
21–23	13	32.5%
24 and above	3	7.5%
Gender		
Male	18	45.0%
Female	22	55.0%
Educational Stream		
Arts	15	37.5%
Science	16	40.0%

Demographic Variable	Frequency	Percentage
Commerce	9	22.5%
Residence		
Urban	23	57.5%
Rural	17	42.5%
Previous Awareness of Eye Donation		
Yes	25	62.5%
No	15	37.5%

In this sample, 60% of students were aged 18–20 years, 55% were female, and 40% were enrolled in science courses. Most participants (57.5%) belonged to urban areas, while 62.5% reported previous awareness of eye donation.

Table 2: Distribution of Pre-Test and Post-Test Knowledge Levels (N = 40)

Knowledge Level	Pre-Test f (%)	Post-Test f (%)
Inadequate	29 (72.5%)	3 (7.5%)
Moderately adequate	9 (22.5%)	13 (32.5%)
Adequate	2 (5.0%)	24 (60.0%)
Total	40 (100%)	40 (100%)

The findings show that the proportion of students with adequate knowledge increased from 5% in the pre-test to 60% in the post-test.

Table 3: Comparison of Mean Pre-Test and Post-Test Knowledge Scores (N = 40)

Assessment	Mean	SD	Mean Difference
Pre-test	9.25	3.10	—
Post-test	17.80	2.65	8.55

The mean knowledge score increased from 9.25 to 17.80 out of 25.

The mean percentage score increased from 37.0% to 71.2%, representing an improvement of 34.2 percentage points.

Table 4: Distribution of Pre-Test and Post-Test Attitude Levels (N = 40)

Attitude Level	Pre-Test f (%)	Post-Test f (%)
Unfavourable	16 (40.0%)	2 (5.0%)
Moderately favourable	21 (52.5%)	17 (42.5%)
Favourable	3 (7.5%)	21 (52.5%)
Total	40 (100%)	40 (100%)

The distribution shows that favourable attitudes increased from 7.5% during the pre-test to 52.5% during the post-test.

Recommendations

1. Similar studies may be conducted among larger samples of undergraduate students.
2. A randomized controlled trial may compare technology-assisted health education with conventional teaching methods.
3. A comparative study may assess eye donation awareness among students from urban and rural colleges.
4. A longitudinal study may evaluate retention of knowledge and attitudes after three or six months.
5. Future research may examine the effectiveness of mobile applications and social media campaigns in promoting eye donation awareness.
6. Additional studies may explore the relationship between eye donation knowledge, attitude, intention to pledge, and actual registration.

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