

Efficacy of Online VAT Programme on Knowledge and Attitude Regarding Eye Donation

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Abstract

Background: Corneal diseases constitute significant causes of visual impairment and blindness worldwide, especially in developing countries. Corneal transplantation offers the potential for sight restoration to those who are blind from corneal diseases. Number of eye donations remain quite insufficient in India. Eye donations are dependent on people willing to pledge their eyes on donation and on relatives to honour that pledge upon the death of the person. Assessment of knowledge and attitude on eye donation is essential for better understanding of the people on different aspects of eye donation. **Objectives:** To evaluate the effectiveness of online video assisted teaching programme on knowledge and attitude regarding eye donation among non-medical undergraduate students. **Design:** Pre experimental one group pre test and post test design. **Setting:** Nonmedical colleges in Raipur. **Sample Size:** 50 non medical undergraduate students. **Sampling Technique:** Non probability sampling technique. **Method:** Pre test was done by using self structured questionnaire and attitude scale, after that online video assisted teaching programme was given and post test was done by using the same scale and questionnaire on 15th day. **Results:** In pre test 10% students had inadequate knowledge and 54% had moderate knowledge, while 36% had adequate knowledge. In the post test no students was having inadequate knowledge, 12% had moderate knowledge and 88% have adequate knowledge. Association between the pre test knowledge with demographic variables are not significant. **Conclusion:** Online Video assisted programme is effective.

Keywords: Online Teaching; Corneal Blindness; Eye Donation.

Introduction

Many a times the people with good eyesight do not know what practical difficulty the visually impaired people have to face in day to day life. Eye donation or corneal transplantation, is a surgical procedure where a damaged or diseased cornea is replaced by donated corneal tissue. Cornea is a transparent anterior portion of the eye ball. The impairment of cornea is the leading cause blindness in the developing world.

Currently, there are about 8 million corneal blind people in the world.¹ In Ethiopia, trachomatous corneal scarring is responsible for about 12% of blindness.² Although corneal transplantation is the mainstay treatment to rehabilitate vision, its coverage is being influenced by the availability of domestic eye bank, potential donors, and close relative's cooperativeness upon the death of the person.³ In 2010, 85 domestic eye banks of the United States reported that there were 110,600 corneal donations and 59,271 corneal grafts.⁴ In Europe, approximately 20,000 corneal transplantation procedures are performed among 35,000 procured corneas per year.^{5,6} Based upon our current ratio of available safe donor eyes, 277000 donor eyes are needed to perform 100 000 corneal transplants in a year in our country.⁷

Understanding the reasons why people do not donate the eyes is crucial to address the problem of undersupply of cornea and designing any intervention.

Objectives of the Study

1. To assess the knowledge level and attitude regarding eye donation.
2. To evaluate the effectiveness of video assisted teaching (VAT) programme on knowledge and attitude regarding eye donation among non medical students.
3. To find out the correlation between knowledge and attitude scores regarding eye donation among non medical students.
4. To find out the association between pre test knowledge, attitude regarding eye donation among non medical students and their selected demographic variables.

Statement of the problem

A study to evaluate the effectiveness of online video assisted

teaching programme on knowledge and attitude regarding eye donation among non medical undergraduate students at selected colleges in Raipur.

Review of Literature

Phanikumar M, et al. conducted a cross sectional study to assess the knowledge of the undergraduate medical students of RIMS medical college, Kadapa regarding eye donation. A total 200 undergraduate students were enrolled for the study in this study, 98.2% of the undergraduate students were aware that eyes could be donated after death. Only 50% knew that any person above 2 years can donate eyes. Only 16% knew that person who has undergone LASIK cannot donate eyes. The finding of the study revealed the place of eye donation time limit to collect cornea, storage, consent, age limit, contraindications, whom to contact were still not known clearly.⁸

Survase K conducted a cross sectional study to assess the knowledge and attitude among 400 polytechnic students towards eye donation in India. The majority (89.7%) of students knew that eyes can be donated after death most participants (85.1%) were willing to donate their eyes. Perceived reason for not pledging eyes by the students were the unacceptable idea of spreading the eyes from the body (60.8%), lack of Awareness (49.8%), objection by family members (28.5%). The findings of the study revealed that polytechnic were well aware of eye donations and most of them were inclined to sign up from eye donation. The perceived reason for not donating eyes are lack of awareness about eye donation in the community.⁹

Annadurai K, et al. conducted a cross sectional study to assess the knowledge, attitude and practices on organ & eye donation among Hindustan Arts & science college, Chennai, Tamil Nadu. Among 440 students aged 18 years and above the students were interviewed with a pretested questionnaire and the participants 23.8% were aware of the term organ donation, 86.1% were not aware of legislation 75% of respondents were in favour of organ donation. The finding of the study reveals effective measures should be taken to educate degree students with relevant information with the involvement of media, health professionals, non governmental organizations to raise knowledge attitudes regarding organ & tissue donation.¹⁰

Ronanki V R, et al. conducted a study to assess the awareness regarding eye donation among stakeholders in Srikakulam district in the state of Andhra Pradesh in India. 355 subjects were selected from the district using multi-stage random sampling, off the 355 subjects interviewed 192 (54%) were male and 163 (46%) were female. The mean age of the stake holder was 35.9 Years and all that study subjects were literate. 93% of subjects were aware of the concept of eye donation. 82% of the subjects were willing to donate their eyes. The finding of the study revealed that to promote awareness regarding eye donation among the general population.¹¹

Mathew J, et al. conducted a correlation study to assess the knowledge and attitude regarding Eye Donation among. The adolescent at Yenepoya University College, Mangalore, the structured knowledge questionnaire and attitude scale. On Eye donation were used to collect data. The mean Percentage of the knowledge scores among adolescents were 57%, the mean percentage of the attitude score among Adolescents Were 70.5% and there was a positive correlation between knowledge and attitude among adolescents ($r=0.201$) (98) Table Value $r=0.236$, $p<0.313$) (98). The finding off the study showed adolescent had good knowledge and positive Attitude towards Eye Donation

and there was Positive correlation between knowledge and attitude among adolescent.¹²

Methodology

Research approach

In the view of nature of the problem selected for the study and the objectives to be accomplished, quantitative research approach is considered as an appropriate research approach for the study.

Research design

The research design selected for the present study is a pre experimental one group pre test and post test design to evaluate the effectiveness of video assisted programme on eye.

Research setting

The study will be conducting at selected non medical colleges in Raipur through online.

Population

Under graduate students of selected colleges of Raipur.

Sample and sample size

Non medical students and the sample of the study- 50 non medical students.

Sampling criteria

Inclusion criteria:

- Non medical students who are present at the time of data collection.
- Both male and female.
- Who gave consent to participate in this study.

Exclusion criteria:

- Non medical students who are not willing to participate.
- Non medical students who have already participated in similar studies.

Sampling technique

Convenient sampling technique is a non probability sampling procedure used to draw the sample.

Plan for data collection

The investigator herself with collect the data from non medical students by using.

- Structured questionnaire and attitude scale through online.
- Conduct video assisting programme for non medical students through online.
- Same structured questionnaire and attitude scale will be used for post test to assess the effectiveness of video assisting programme via online.

Ethical consideration

Prior permission obtained from the institutional ethical committee.

- Prior permission obtained from the college authorities.
- Informed written consent taken prior to the study from the study subjects.

Description of data collection instrument.

Description of tools:

- The investigators developed a structured knowledge questionnaire for assessing the knowledge regarding eye donation.
- An attitude scale regarding eye donation used to determine positive attitude of non medical students.

- An attitude scale regarding eye donation used to determine positive attitude of non medical students.

Validity:

The content validity of structured questionnaire and attitude scale validated in consultation with guide and field experts (doctors, statistician and nurse specialist).

Reliability:

Tested using Split half method.

Pilot Study

Pilot study held with five non medical undergraduate students from selected colleges of Raipur via online.

Procedure for data collection

Permission taken from concerned authority of College of Nursing, AIIMS Raipur, prior to collection of data.

Pre test: Non medical degree students were requested to complete structured questionnaire, attitude scale, before the video assisted teaching programs. Implementation of video assisted teaching programme was given to non medical undergraduate students via online.

Post test: Non medical undergraduate students were requested to complete the structured questionnaire and attitude scale after the intervention via online.

Analysis and Interpretation of Data

Section A: Description of socio-demographic variables of undergraduate students.

- **Age:** Out of 50 students, 9 belonged to the age group of 18-19 years (18%), 32 belonged to the age group of 20-21 years (64%), 9 belonged to the age group of 22-23 years (18%).
- **Gender:** All under graduate students were female.
- **Area of residence:** Out of 50 undergraduate students 17 were from rural area (34%), 21 were from urban area (42%) and remaining 12 were from semi urban (24%).
- **Religion:** Regarding religion 41 (82%) were Hindu, 1 (2%) were Muslim and 8 (16%) were others.
- **Source of information:** Regarding source of information 5 (10%) from school, 8 (16%) from mass media, 4 (8%) from health personnel and 33 (66%) gets information from all sources.

Section B: Assessment of knowledge and attitude regarding eye donation awareness among non medical undergraduate students.

Table 1: Frequency and percentage distribution of pre test and post test level of knowledge.

Knowledge	Inadequate knowledge (0-50%)		Moderate knowledge (51-75%)		Adequate knowledge (>75%)	
	Total no of cases	%	Total no of cases	%	Total no of cases	%
Pre test	5	10	27	54	18	36
Post test	0	0	6	12	44	88

p=0.05

In the pre test, 5 out of 50 students had inadequate knowledge which comprises 10% of the total data, 27 out of 50 students had moderate knowledge which comprises 54% of the total data and further 18 out of 50 had adequate knowledge which comprises 36% of the total

data. In the post test 6 out of 50 have gained moderate knowledge which comprises 12% of the total data and rest 44 out of 50 have gained adequate knowledge which comprises 88% of the total data which shows an improvement in the knowledge of students after video assisted teaching programme (table 1).

Table 2: Frequency and percentage distribution of pre test and post test level of attitude.

Attitude Score	Poor attitude (0-50%)		Average attitude (51-75%)		Good attitude (>75%)	
	Total no of cases	%	Total no of cases	%	Total no of cases	%
Pre test	11	22	9	18	30	60
Post test	0	0	8	16	42	84

p=0.05

In the pre test 11 out of 50 had poor attitude which comprises 22% of the total data, 9 out of 50 students had average attitude which comprises 18% of the total data and further 30 out of 50 had good attitude which comprises 60% of the total data. In the post test no students had found to be poor attitude, 8 out of 50 had average attitude which comprises 16% of the total data and rest 42 out of 50 had good attitude which comprises 84% of the total data, which shows an improvement in the attitude of students regarding eye donation after video assisted teaching programme (table 2).

Section C: Comparison of mean, standard deviation of pre test and post test knowledge and attitude scores regarding eye donation among non medical undergraduate students.

Table 3: Comparison of pre test and post test level of knowledge.

Knowledge	Mean	S.D	Mean improvement	Paired 't' value
				't' (cal) = 9.606 't' (tab) = 2.0 (df) = 49 Significant
Pre test	10.84	1.97	2.44	
Post test	13.28	1.28		

p=0.05

There was mean improvement of 2.44 in the score of post test as the mean score of pre test is 10.84 with S.D is 1.97 and mean score of post test is 13.28 with S.D of 1.28 respectively (table 3). Here 't' (cal) (9.606) > 't' (tab) (2.0) at 5% level of significance. Hence null hypothesis is rejected, which reveals that there is a significant improvement in the knowledge of undergraduate students after video assisted teaching programme on eye donation.

Table 4: Comparison of pre test and post test level of attitude scores.

Attitude Score	Mean	S.D	Mean improvement	Paired 't' value
				't' (cal) = 6.36 't' (tab) = 2.00 (df) = 49 Significant
Pre test	21.08	5.75	4.44	
Post test	25.52	4.59		

p=0.05

There was mean improvement of 4.44 in the score of post test as the mean score of pre test is 21.08 with S.D of 5.75 and mean score of post test is 25.52 with S.D of 4.59 respectively (table 4). Here 't' (cal) (6.36) > 't' (tab) (2.00) at 5% level of significance. Hence null hypothesis is rejected, which reveals that there is a significant improvement in the attitude of undergraduate students after video assisted teaching programme on eye donation.

Section D: Level of association of existing knowledge scores regarding eye donation among non medical undergraduate students with selected demographic variables.

Table 5: Association of pre test level of knowledge with their selected demographic variables.

Demographic variables	Inadequate knowledge (0-50%)	Moderate knowledge (50-75%)	Adequate knowledge (75-100%)	Chi-square value
n=50				
Age				
18-19	0	6	3	X ² (cal)=8.757
20-21	4	13	15	X ² (tab)=9.49 (df)=4
22-23	1	8	0	N.S
Area of Residence				
Rural	1	11	5	X ² (cal)=6.092
Urban	4	11	6	X ² (tab)=9.49 (df)=4
Semi-Urban	0	5	7	N.S
Religion				
Hindu	3	26	12	X ² (cal)=9.15
Muslim	0	0	1	X ² (tab)=9.49 (df)=4
Others	2	1	5	N.S
Type of Family				
Nuclear	4	18	13	X ² (cal)=0.4
Joint	1	9	5	X ² (tab)=5.99 (df)=2
Source of Information				
School	2	2	1	X ² (cal)=10.33
Mass media	1	3	4	X ² (tab)=12.59 (df)=6
Health Personnel	1	3	0	N.S
All	1	9	13	N.S

The association between the pre test level of existing knowledge with demographic variables was not significant (table 5). Hence, H02 is accepted which reveals that there is no significant association between level of existing knowledge regarding eye donation among non medical undergraduate students and selected demographic variables.

Discussion

The main purpose of the study was to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude regarding eye donation among non medical undergraduate students at selected colleges in Raipur with the objectives of assessing the knowledge and attitude and to assess the effectiveness of video assisted teaching programme on eye donation. Also to assess the association between the knowledge of non medical undergraduate students regarding eye donation with selected demographic variables. The conceptual framework or the study was derived from Ludwing Van Bertalanffy General System Theory (1968).

Quantitative research approach and pre experimental research design with one group pre test, post test design was adopted and data was collected by structured questionnaire. The tool was validated by three experts. The reliability of the tool was done before data collection with 5 samples and tool was found to be feasible.

A total 50 samples who met the inclusive criteria was selected by non probability convenience technique. Consent was obtained from the clients. Pre test was conducted and video assisted teaching programme on eye donation was given after which post test was conducted. The analysis was done using paired t test and chi square test.

Major findings were:

- In pre test 10% students had inadequate knowledge and

54% had moderate knowledge, while 36% had adequate knowledge.

- In the post test no students was having inadequate knowledge, 12% had moderate knowledge and 88% have adequate knowledge.

- In pre test 22% of students had poor attitude regarding eye donation, 18% had average while 60% had good attitude.

- In post test no students was having poor attitude, 16% was having average, while 84% have good attitude.

- There is no significant association between level of knowledge regarding eye donation among non medical undergraduate students and selected demographic variables

Conclusion

Online video assisted teaching (VAT) programme was effective in enhancing knowledge and bring positive attitude among non medical undergraduate students.

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