



“Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Regarding Eye Donation Among The Students In Selected Higher Secondary Schools, Kamrup(M), Assam: Quasi Experimental Study.”

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ABSTRACT

BACKGROUND

Blindness is the condition of lacking visual perception due to physiological or neurological factors. Corneal blindness is the leading cause of blindness across the world. Eye donation involves the recovery, preparation and delivery of donated eyes for corneal transplant & recovery. Eye donation is considered one of the most noble acts of humanity by helping to provide vision to the blind. Knowledge & attitude of people plays a major role in establishing a positive consent for eye donation.

OBJECTIVES OF THE STUDY

1. To assess the level of Knowledge regarding Eye donation among the Students in selected higher secondary Schools of Kamrup(M), Assam before & after Structured teaching programme.
2. To assess the level of Attitude regarding Eye donation among the Students in selected higher secondary Schools of Kamrup(M), Assam before & after Structured teaching programme.
3. To find out the effectiveness of Structured teaching programme on Knowledge & Attitude regarding Eye donation among the Students in selected higher secondary Schools of Kamrup(M), Assam.
4. To find out the correlation between Knowledge & Attitude regarding Eye donation among Students in selected higher secondary Schools of Kamrup(M), Assam.
5. To find out the association between pretest Knowledge of Students regarding Eye donation with the selected demographic variables.
6. To find out the association between pretest Attitude of Students regarding Eye donation with the selected demographic variables.

METHODS AND MATERIALS

Quasi experimental one group pre test post test research design was used in this study. Non probability convenience sampling technique was used for obtaining the adequate sample for the study. Study was undertaken on 100 students in selected higher secondary schools of Kamrup (M) Assam on the basis of inclusion criteria. Pre test knowledge was checked using self structured knowledge questionnaire and attitude was assessed using 5-point Likert scale. The post test was conducted on the seventh day after administration of structured teaching programme in the same manner.

RESULTS

In the pre test, 68 students (68%) had moderate knowledge regarding eye donation, 32 students (32%) had adequate knowledge. After the intervention, 61 students (61%) had adequate knowledge, 39 students (39%) had moderate knowledge regarding eye donation. In the pre test, 72 students (72%) had moderately desirable attitude regarding eye donation, 28 students (28%) had desirable attitude. After the intervention, 59 students (59%) had desirable attitude, 41 students (41%) had moderately desirable attitude regarding eye donation. In the pre test mean knowledge score was 16.99 (SD 2.26) whereas in post test, the mean knowledge score was 19.11 (SD 2.09). In the pre test mean attitude score was 50.23 (SD 5.57) whereas in post test, the mean attitude score was 55.87 (SD 5.37). The computed paired “t” test value of $t = 18.900$ was significant at $p < 0.001$ level which clearly indicates that the structured teaching programme on knowledge regarding eye donation was effective in improving the level of knowledge among them in post test. Whereas the computed paired “t” test value of $t = 21.728$ was statistically significant at $p < 0.001$ level which clearly indicates that structured teaching programme on attitude regarding eye donation was effective in improving the level of attitude among them in post test, which indicated that the structured teaching programme regarding eye donation was effective in improving knowledge and attitude of the students. The analysis showing that the calculated ‘r’ value was found to be, $r = 0.773$, showed there was strong positive correlation between pre test knowledge and pre test attitude. Hence with increased in knowledge, there was gradually increased in positive attitude of students in pretest. The analysis showing that the calculated ‘r’ value was found to be, $r = 0.756$, showed there was strong positive correlation between post test knowledge and post test attitude. Hence with increased in knowledge, there was gradually increased in positive attitude of students in post test. The analysis showed that there was no significant association between pre test knowledge and attitude regarding eye donation with selected demographic variable such as age, gender, educational qualification, stream, religion, family history, previous information, sources of information.

CONCLUSION

Based on the analysis of the findings of the study, the following inferences were drawn. There was evident increase in the knowledge and attitude in all areas included in the study after administration of structured teaching programme on eye donation. Thus it was proved that the structured teaching programme was effective teaching method for creating awareness on importance of eye donation.

KEY WORDS: Structured teaching programme, Knowledge, Attitude, Eye donation, Student and School.

1. INTRODUCTION

Corneal blindness considers one of the preeminent outcomes of blindness in India and globally, affecting around 8 million population worldwide. Corneal blind patients many of them visually rehabilitated by corneal transplantation. Eye banking plays an important role in alleviate corneal transplantation and ocular research. Many countries have endorsed regulatory frameworks, and technological advancements, quality assurance programmes to enhance the efficacy and safety of corneal transplantation. According to the Eye Bank Association of India (EBAI), aid in establishing guidelines and standards for Eye Bank practices help in better upgrade in cornea collection, processing & transplanting. Various campaigns such as the National Programme for Control of Blindness (NPCB) have greatly contributed to Eye donation rates and improved access to donor corneas.

Donating the eyes after death for transplantation with the family consent is called Eye donation. Cornea is the outermost layer; it is a clear tissue covering the front of the eye. From the disease condition, injury, poor nutrition and infection the cornea becomes cloudy which results in vision reduced or lost. From the healthy donated human corneas were replacing the damaged cornea and corneal blindness can be treated. Most of the children, young adults affect from corneal blindness who had long life ahead. According to Eye Bank

Association of India, 2019 nearly 11 Lakh blind population of our country was awaiting for corneal transplantation and approximately 25,000 new cases was being reported.

2. NEED OF THE STUDY

According to WHO reported on 10 August 2023 globally, at least 2.2 billion people have a near or distance vision impairment. Out of which 1 billion of these, vision impairment could have been prevented or yet to be addressed. The main causes of vision impairment and blindness at a global level are refractive errors and cataracts. It was assessed that globally only 36% of people having a distance vision impairment due to refractive error and only 17% of people with vision impairment due to cataract have received access to an appropriate intervention. Vision impairment poses an immense global financial burden, with the annual global cost of productivity estimated to be US\$ 411 billion. People with all ages can be affect with vision loss; however, most people with vision impairment and blindness was over the age of 50 years.

The Blindness Prevention Week was held from 1 to 7 April 2023, reported on 31st March 2023 that Indian government organizes the campaign on the above-mentioned date to raise awareness about the blind. Blindness had a serious and painful problem and only the blind can conceive that pain. The campaign was organized to elevate awareness for all the citizens of the country to remember them the value of eyes for the blind, for people who were blind by birth or lose their eyesight due to an accident. From the research study it has proved that there were approximately 10 million people who suffer from blindness in our country and this number was 37 million worldwide. The Indian government organized the campaign to promote awareness and provide opportunities to the blind by establishing a variety of institutions, agencies, hospitals, etc. During the week, people are educated and awareness promoted about health care and eye care.

Investigator want do this research study among the higher secondary students as because today's youth is future and backbone of any society in shaping the present and future. Their energy, enthusiasm, and fresh perspectives inject vitality into every aspect of society. Because of which investigators focus on the students to aware more knowledge and change the attitude of the students regarding eye donation for the better reinforcement of society.

3. OBJECTIVE OF THE STUDY

1. To assess the level of Knowledge regarding Eye donation among the Students in selected higher secondary Schools of Kamrup(M), Assam before & after Structured teaching programme.
2. To assess the level of Attitude regarding Eye donation among the Students in selected higher secondary Schools of Kamrup(M), Assam before & after Structured teaching programme.
3. To find out the Effectiveness of Structured teaching programme on Knowledge & Attitude regarding Eye donation among the Students in selected higher secondary Schools of Kamrup(M), Assam.
4. To find out the correlation between Knowledge & Attitude towards Eye donation among Students in selected higher secondary Schools of Kamrup(M), Assam.
5. To find out the association between pretest Knowledge of Students regarding Eye donation with the selected demographic variables.
6. To find out the association between pretest Attitude of Students regarding Eye donation with the selected demographic variables.

4. METHODS AND MATERIALS

Quasi experimental one group pre test post test research design was used in this study. Non probability convenience sampling technique was used for obtaining the adequate sample for the study. Study was undertaken on 100 students in selected higher secondary schools of Kamrup (M) Assam on the basis of inclusion criteria. Pre test knowledge was checked using self structured knowledge questionnaire and attitude was assessed using 5-point Likert scale. The post test was conducted on the seventh day after administration of structured teaching programme in the same manner.

5. DESCRIPTION OF THE TOOL

The tools used for the study consists of three sections:

Section I – Dealt with Demographic variables: Age, gender, educational qualification, stream, religion, family history of eye donation, information regarding eye donation, sources of getting information.

Section II – Dealt with self structured Knowledge questionnaire: This questionnaire consisted of 24 questions to assess the level of knowledge.

Scoring key: One correct answer for each question. For every correct response, a score of '1' mark and for incorrect response, a score of '0' mark was given. Hence, the maximum score was 24 and the minimum score was 0.

The score were converted to percentage and interpret the level of knowledge and categorized as follows:

- Inadequate knowledge: <33% (<8 scores)
- Moderately adequate knowledge: 33 % – 75% (8 – 18 scores)
- Adequate knowledge: >75% (>18 scores)

Section III – Dealt with Attitude scale: This tool was prepared based on 5 – point Likert scale to assess the attitude level. A total of 14 statements were included in the attitude scale. It consisted of 9 positive statements and 5 negative statements

- For positive statement strongly agree – 5 marks, Agree – 4 marks, Neutral – 3 marks, Disagree – 2 marks, Strongly disagree – 1 mark,
- For negative statement strongly agree – 1 mark, Agree – 2 marks, Neutral – 3 marks, Disagree – 4 marks, Strongly disagree – 5 marks,
- Total score was 70

To interpret the attitude, the scores were converted into percentage and classified as followed:

- Undesirable attitude: < 33% (<23)
- Moderately desirable attitude: 33% - 75% (23 - 53)
- Desirable attitude: >75% (>53)

6. DATA COLLECTION PROCESS

The data collection was done under the following process:

- Formal approval was obtained from Institutional Ethical Committee.
- The investigator had taken the list of schools of Kamrup (M) from the Inspector of schools, Panbazar, Asaam.
- Two schools of Kamrup(M) were selected using lottery method.
- Formal permission was taken from the Principal of Gyan Educational institution, Jyotikuchi and St. Joseph's school, Azara.
- Main study was conducted from 10th September to 3rd October 2024. After getting the permission, by using non probability Convenience sampling technique total 100 students in class 11th and 12th of all stream were selected for the study from two schools.
- Written informed consent was taken from the participants.
- Self administered self structured questionnaire on demographic variable and self structured knowledge questionnaire and 5 point Likert scale was used to conduct the pre test 10th September and 11th September, 2024 at Gyan Educational Institution and on 16th September 2024 at St. Joseph's School which took 30 minutes to complete the questionnaire and 5-point Likert scale.
- The structured teaching programme on eye donation was given after the pre – test for 30 minutes. The students interacted and cooperated well with the investigator and were satisfied with the information they got.
- On 7th day (18th September and 23rd September 2024) post test was conducted using the same tool.

7. RESULT:

SECTION I

- Frequency and percentage distribution of students according to their demographic variables.

Table 1: Frequency and percentage distribution of students according to their demographic variables.

n=100

Demographic Variables	Frequency (f)	Percentage (%)
Age (in years)		
≤16	29	29
17 – 18	56	56
19 – 20	15	15
>20	-	-
Gender		
Male	50	50
Female	50	50
Transgender	-	-
Educational qualification		
Class 11	55	55
Class 12	45	45
Stream		
Arts	38	38
Science	45	45
Commerce	17	17
Religion		
Hindu	75	75
Islam	15	15
Christian	10	10
Others	-	-
Family history of eye donation		
Yes	-	-
No	100	100
Do you have previous information regarding eye donation?		
Yes	95	95
No	5	5
If yes, specify source of getting information		

Demographic Variables	Frequency (f)	Percentage (%)
Mass media	55	57.9
Social media	31	32.6
Health personnel	5	5.3
Relatives / Friends	4	4.2

SECTION II

- Frequency and percentage distribution of pre test and post test level of knowledge regarding eye donation among the students.

Table 2: Frequency and percentage distribution of pretest and post test level of knowledge regarding eye donation among the students

n = 100

Level of Knowledge	Pretest			Post Test		
	Frequency	Percentage	Range of score	Frequency	Percentage	Range of score
Inadequate knowledge (<8)	-	-	21 – 13	-	-	23 – 14
Moderate (8 – 18)	68	68%		39	39%	
Adequate (>18)	32	32%		61	61%	

Table 2: It showing that in the pretest, 68(68%) had moderate knowledge regarding eye donation, 32(32%) had adequate knowledge and after the intervention, 61(61%) had adequate knowledge, 39(39%) had moderate knowledge regarding Eye donation.

SECTION III

- Frequency and percentage distribution of pre test and post test level of attitude regarding eye donation among the students.

Table 3: Frequency and percentage distribution of pre test and post test level of attitude regarding eye donation among the students

n=100

Level of Attitude	Pretest			Post Test		
	Frequency	Percentage	Range of score	Frequency	Percentage	Range of score
Undesirable attitude (<23)	-	-	68 – 42	-	-	69 - 47
Moderately desirable attitude (23 – 53)	72	72%		41	41%	
Desirable attitude (>53)	28	28%		59	59%	

Table 3: It showing that in the pretest, 72(72%) had moderately desirable attitude regarding eye donation, 28(28%) had desirable attitude and after the intervention, 59(59%) had desirable attitude, 41(41%) had moderately desirable attitude regarding eye donation.

SECTION IV

Effectiveness of structured teaching programme on knowledge regarding eye donation among the students.

- H_{01} : There is no significant difference between the pre test & post test knowledge score among the students regarding eye donation.
- H_{11} : There is significant difference between the pre test & post test knowledge score among the students regarding eye donation.

Table 4: Effectiveness of structured teaching programme on knowledge regarding eye donation among the students.

n = 100

Knowledge	Mean	SD	Mean difference and percentage	Paired “t” test & p-value
Pre test	16.99	2.26	2.12 (8.83%)	t = 18.900 p = 0.0001, S***
Post test	19.11	2.09		

***p<0.001, S – Significant

Table 4: It showing that the pretest mean score of knowledge was 16.99 ± 2.26 and the post test mean score was 19.11 ± 2.09 . The mean difference score was 2.12 with percentage 8.83%. The computed paired “t” test value of $t=18.900$ was statistically significant at $p<0.001$ level which clearly indicates that structured teaching programme on knowledge regarding eye donation administered among the students was effective in improving the level of knowledge among them in the post test.

Effectiveness of structured teaching programme on attitude regarding eye donation among the students

- H_{02} : There is no significant difference between the pre test & post test attitude score among the students regarding eye donation.
- H_{2} : There is significant difference between the pre test & post test attitude score among the students regarding eye donation.

Table 5: Effectiveness of structured teaching programme on attitude regarding eye donation among the students

n = 100

Attitude	Mean	SD	Mean difference and percentage	Paired “t” test & p-value
Pre test	50.23	5.57	5.64 (8.06%)	t = 21.728 p = 0.0001, S***
Post Test	55.87	5.37		

***p<0.001, S – Significant

Table 5: It showing that the pre test mean score of attitude was 50.23 ± 5.57 and the post test mean score was 55.87 ± 5.37 . The mean difference score was 5.64 and the percentage was 8.06%. The calculated paired “t” test value of $t=21.728$ was statistically significant at $p<0.001$ level which clearly denotes that structured teaching programme on attitude regarding eye donation administered among the students was effective in improving the level of attitude among them in the post test.

Section – V

Correlation between knowledge and attitude regarding eye donation among students in selected higher secondary schools, Kamrup(M), Assam.

- H_{03} : There is no significant correlation between knowledge & attitude regarding eye donation among students.
- H_3 : There is significant correlation between knowledge & attitude regarding eye donation among students.

Table 6: Correlation between pre test knowledge and attitude regarding eye donation among students**n = 100**

Variables	Mean	SD	Karl Pearson's Correlation "r" & p-value
Knowledge (Pre test)	16.99	2.26	r = 0.773 p = 0.0001, S***
Attitude (Pre test)	50.23	5.57	

***p<0.001, S – Significant

Table 6: It showing that the pre test mean score of knowledge was 16.99 ± 2.26 and the pre test mean score of attitude was 50.23 ± 5.57 . The calculated Karl Pearson's Correlation value of $r=0.773$ shows a strong positive correlation which was statistically significant at $p<0.001$ level.

Table 7: Correlation between post test knowledge and attitude regarding eye donation among students**n = 100**

Variables	Mean	SD	Karl Pearson's Correlation "r" & p-value
Knowledge (Post test)	19.11	2.09	r = 0.756 p = 0.0001, S***
Attitude (Post test)	55.87	5.37	

***p<0.001, S – Significant

Table 7: It showing that the post test mean score of knowledge was 19.11 ± 2.09 and the post test mean score of attitude was 55.87 ± 5.37 . The calculated Karl Pearson's Correlation value of $r=0.756$ shows a strong positive correlation which was statistically significant at $p<0.001$ level which clearly indicate that after the administration of structured teaching programme on knowledge regarding eye donation the knowledge among the students increases which ultimately increases their attitude towards it.

Section – VI

Association between the pre test knowledge and attitude with the selected demographic variables such as age, gender, educational qualification, stream, religion, family history, previous information, sources of information of students in selected higher secondary schools, Kamrup(M), Assam.

- H_{04} : There is no significant association between pre test knowledge regarding eye donation with the demographic variables.
- H_4 : There is significant association between pre test knowledge regarding eye donation with the demographic variables.

Table 8: Association of pretest level of Knowledge regarding Eye donation among Students with their selected demographic variables.**n = 100**

Demographic Variables	Moderately Adequate knowledge		Adequate Knowledge		Fisher Exact test p-value
	No.	%	No.	%	
Age (in years)					p = 0.795 (N.S)
≤16	20	20.0	9	9.0	
17 – 18	39	39.0	17	17.0	
19 – 20	9	9.0	6	6.0	
>20	-	-	-	-	

Demographic Variables	Moderately Adequate knowledge		Adequate Knowledge		Fisher Exact test p-value
	No.	%	No.	%	
Gender					p = 1.000 (N.S)
Male	34	34.0	16	16.0	
Female	34	34.0	16	16.0	
Transgender	-	-	-	-	
Educational qualification					p = 0.524 (N.S)
Class 11	39	39.0	16	16.0	
Class 12	29	29.0	16	16.0	
Stream					p = 0.633 (N.S)
Arts	24	24.0	14	14.0	
Science	31	31.0	14	14.0	
Commerce	13	13.0	4	4.0	
Religion					p = 0.054 (N.S)
Hindu	49	49.0	26	26.0	
Islam	9	9.0	6	6.0	
Christian	10	10.0	0	0	
Others	-	-	-	-	
Family history of eye donation					-
Yes	-	-	-	-	
No	68	68.0	32	32.0	
Do you have previous information regarding eye donation?					p = 1.000 (N.S)
Yes	64	64.0	31	31.0	
No	4	4.0	1	1.0	
If yes, specify source of getting information					
Mass media	38	40.0	17	17.9	p = 0.924 (N.S)
Social media	20	21.1	11	11.6	
Health personnel	3	3.2	2	2.1	
Relatives / Friends	3	3.2	1	1.1	

N.S – Not Significant, $p > 0.05$

Table 8: It showing that the demographic variables did not show statistically significant association with pretest level of knowledge regarding eye donation among higher secondary students at $p < 0.05$ level.

- H_{05} : There is no significant association between pre test attitude regarding eye donation with the demographic variables.
- H_5 : There is significant association between pre test attitude regarding eye donation with the demographic variables.

Table 9: Association of pretest level of attitude regarding eye donation among students with their selected demographic variables.

n = 100

Demographic Variables	Moderately Desirable Attitude		Desirable Attitude		Fisher Exact test p-value
	No.	%	No.	%	
Age (in years)					$p = 0.907$ (N.S)
≤16	21	21.0	8	8.0	
17 – 18	41	41.0	15	15.0	
19 – 20	10	10.0	5	5.0	
>20	-	-	-	-	
Gender					$p = 0.504$ (N.S)
Male	24	24.0	16	16.0	
Female	36	36.0	12	12.0	
Transgender	-	-	-	-	
Educational qualification					$p = 1.000$ (N.S)
Class 11	40	40.0	15	15.0	
Class 12	32	32.0	13	13.0	
Stream					$p = 0.637$ (N.S)
Arts	27	27.0	11	11.0	
Science	31	31.0	14	14.0	
Commerce	14	14.0	3	3.0	
Religion					$p = 0.063$ (N.S)
Hindu	53	53.0	22	22.0	
Islam	9	9.0	6	6.0	
Christian	10	10.0	0	0	
Others	-	-	-	-	
Family history of eye donation					-
Yes	-	-	-	-	
No	72	72.0	28	28.0	
Do you have previous information regarding eye donation?					$p = 1.000$ (N.S)
Yes	68	68.0	27	27.0	

Demographic Variables	Moderately Desirable Attitude		Desirable Attitude		Fisher Exact test p-value
	No.	%	No.	%	
No	4	4.0	1	1.0	p = 1.000 (N.S)
If yes, specify source of getting information					
Mass media	39	41.1	16	16.8	
Social media	22	23.2	9	9.5	
Health personnel	4	4.2	1	1.1	
Relatives / Friends	3	3.2	1	1.1	

N.S – Not Significant, $p > 0.05$

Table 9: It showing that the demographic variables did not show statistically significant association with pretest level of attitude regarding eye donation among higher secondary students at $p < 0.05$ level.

CONCLUSION

Based on the analysis of the following study, the following inferences were drawn:

In the pre test, 68 Students (68%) had moderate knowledge regarding eye donation, 32 students (32%) had adequate knowledge. After the intervention, 61 students (61%) had adequate knowledge, 39 students (39%) had moderate knowledge regarding eye donation. In the pre test, 72 students (72%) had moderately desirable attitude regarding eye donation, 28 students (28%) had desirable attitude. After the intervention, 59 students (59%) had desirable attitude, 41 students (41%) had moderately desirable attitude regarding eye donation. In the pre test mean knowledge score was 16.99 (SD 2.26) whereas in post test, the mean knowledge score was 19.11 (SD 2.09). In the pre test mean attitude score was 50.23 (SD 5.57) whereas in post test, the mean attitude score was 55.87 (SD 5.37). The computed paired “t” test value of $t = 18.900$ was statistically significant at $p < 0.001$ level which clearly indicates that structured teaching programme on knowledge regarding eye donation was effective in improving the level of knowledge among them in post test. Whereas the computed paired “t” test value of $t = 21.728$ was statistically significant at $p < 0.001$ level which clearly indicates that structured teaching programme on attitude regarding eye donation was effective in improving the level of attitude among them in post test, which indicated that the structured teaching programme regarding eye donation was effective in improving knowledge and attitude of the students. The analysis showing that the calculated ‘r’ value was found to be, $r = 0.773$, showed there was strong positive correlation between pre test knowledge and pre test attitude. Hence with increased in knowledge, there was gradually increased in positive attitude of students in pretest. The analysis showing that the calculated ‘r’ value was found to be, $r = 0.756$, showed there was strong positive correlation between post test knowledge and post test attitude. Hence with increased in knowledge, there was gradually increased in positive attitude of students in post test. The analysis showing that there was no significant association between pre test knowledge and attitude regarding eye donation with selected demographic variable such as age, gender, educational qualification, stream, religion, family history, previous information, sources of information.

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