



EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING EYE DONATION AMONG PHYSIOTHERAPY STUDENTS AT SELECTED PHYSIOTHERAPY COLLEGE, COIMBATORE.

Ophthalmology

Mrs. Dharshana. A. J.

Nursing Lecturer.

Ms. Celin kerisha. S

Ms. Sowmiya. D

Ms. Jeny Jose

Ms. Abitha. S

Mr. Hrithul Ram. P. S

Dr. Sundar. D M.S DO, Professor of Ophthalmology.

Prof. Dr. A. Jeyadeepa M.sc(N), Ph.D., Principal, PSG College of Nursing, Coimbatore.

ABSTRACT

Introduction: Eyes are one of the most important sensory organs in human body as it furnishes vision and power to see. Corneal blindness is the leading cause of blindness across the world, with Asia having a prevalence of 0.4%. Eye Donation involves the recovery, preparation and delivery of donated eyes for corneal transplant and research. **Methods:** The pre-experimental one group pretest -posttest research design was adopted for this study. Effectiveness of structured teaching program regarding Eye Donation among Physiotherapy students. AS per the inclusion criteria ,40 study participants were selected by simple random sampling technique, data was collected using demographic variables and structured knowledge questionnaire consists of 20 questions. The collected data was entered into Excel sheet and examined through IBM SPSS Statistics 28 version. **Results:** The result of the study reveals that comparison of the pretest mean score of Eye Donation among Physiotherapy students was 13.02±2.29 and the posttest mean score was 18.8±1.95. The mean difference score was 5.78 and the calculated paired t test value was 9.02 at p<0.05 level. Hence the research hypothesis (H1) was retained. This infers that the structured teaching program regarding Eye Donation is found to be effective in improving the knowledge among Physiotherapy students. **Conclusion:** Hence it is concluded that structured teaching program regarding Eye Donation is found to be effective in improving the knowledge among Physiotherapy students.

KEYWORDS

Effectiveness, Structured Teaching Program, Knowledge, Eye Donation, Physiotherapy students.

INTRODUCTION

Eyes are one of the most important sensory organs in human body as it furnishes vision and power to see. The people with visual impairment feel that their life is incomplete as they can just feel, touch and smell but not see. Corneal diseases are a significant cause of visual impairment and blindness in the developing world. It includes keratitis and trauma resulting in corneal scarring, which are the major causes of bilateral or unilateral blindness and visual impairment in children and young adults. So National Program for control blindness was launched in 1976 with the goal to reduce the prevalence of blindness from 1.4% to 0.3% by 2020. But WHO estimates that the blind population rise and longevity. **WHO, 2020.**

Blindness is a major public health problem in most parts of the world. According to Global health journal 36 million people across the world suffering from blindness. In India 8.8 million people are suffering from blindness. So, India alone carries one fourth of the world's burden. Corneal blindness (8-25%) so one of the most common causes of blindness. It is expected that the number of individuals with unilateral corneal blindness in India will increase to 10.6 million. According to this estimate 25,000 to 30,000 corneal blindness cases get added one every year in the country. The shortage of available donor is mainly due to lack of awareness and many factors which affect the willingness to donate. **Global Health Journal, 2020.**

Corneal blindness is the leading cause of blindness across the world, with Asia having a prevalence of 0.4%. Tran TM, Duong H, Bonnet C, Kashanchi A, Buckshey A, **Aldave AJ (2020).**

Corneal transplant, a surgical procedure to replace part of your cornea with corneal tissue from a donor, has reduced by approximately 52% during COVID-19 pandemic. When the COVID-19 outbreak began last year in March 2020, corneal tissue retrieval was temporarily halted, putting corneal transplants on hold. According to EBAI (Eye

Bank Association of India), the number of corneal transplants has reduced to 12,998 between April 2020 to March 2021, while 27,075 corneal transplants were conducted in the previous year. **EBAI (Evidenced Based Assessment and Intervention) (2021).**

Eye donation involves the recovery, preparation, and delivery of eyes for corneal transplants and research. The first successful corneal transplant was in 1905, and the first eye bank was established in 1944. Organ donation advanced in 1954 when Dr. Joseph Murray performed the first kidney transplant, earning a Nobel Prize in 1990. In India, organ donation is governed by the Transplantation of Human Organs and Tissues Act. According to **WHO (2022)**, India has a low organ donation rate of 0.01%.

Corneal transplantation is the best option for visual rehabilitation, but India needs 2,70,000 donor eyes annually for 1,00,000 transplants—four times the current availability. To address this, a 3-tier system of eye donation centers, eye banks, and training centers has been proposed. These centers handle tissue collection, processing, distribution, and public awareness. The Eye Donation Center (EDC) also coordinates with families and institutions, promotes safe practices, and collects blood for serology.

The National Blindness Survey (2015–2019) reports 0.36% overall blindness in India, with corneal blindness accounting for 7.4% in those aged ≥50 and 37.5% in those 0–49. Globally, only one donor cornea is available for every 70 patients, largely due to low awareness among potential donors and families.

NEED FOR THE STUDY

Vision is the ability to perceive the environment through light in the visible spectrum. Any loss in this function leads to visual impairment or blindness, which can range from partial to complete. According to WHO, someone goes blind every five seconds, though 80% of visual

impairments are preventable or treatable. Globally, 1.285 million people are visually impaired, including 39 million who are blind—80% of whom live in developing countries. Vision impairment from untreated myopia and presbyopia causes an estimated annual productivity loss of US \$244 billion and \$25.4 billion, respectively (WHO, 2022).

A global survey on eye banking revealed only one cornea is available for every 70 in need, highlighting a major shortage (Bourne R., Lancet Global Health, 2021). In India, the cornea procurement rate is about 22,000 per year, but most are unsuitable for transplant. To meet the need for 100,000 transplants annually, 277,000 donor eyes are required. The Hospital Corneal Retrieval Program (HCRP) plays a key role in motivating donations, especially from terminally ill or accident victims. However, eye donations dropped by 52% during the COVID-19 pandemic. India needs at least 200,000 donations yearly but averages only 45,000 (Free Press Journal, 2022).

Educators must recognize their role in promoting eye donation. Assessing the knowledge and attitudes of physiotherapy students can help shape effective educational strategies. Understanding how education and cultural factors influence students' perspectives is crucial to improving eye donation rates.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching program on knowledge regarding Eye Donation among physiotherapy students at selected college of physiotherapy, Coimbatore.

OBJECTIVES

1. To assess the level of knowledge regarding eye donation among the physiotherapy students.
2. To assess the effectiveness of structured teaching program regarding eye donation among the physiotherapy students
3. To associate between pre-test level of knowledge score on eye donation with selected demographic variables among the physiotherapy students:

HYPOTHESES

H_1 : There will be a significant difference between pre test level of knowledge on eye donation among the physiotherapy students.

H_2 : There will be a significant association between pre test level of knowledge score on eye donation with their selected demographic variable among the physiotherapy students.

METHODOLOGY

A quantitative research approach and pre-experimental one group pre-test and post-test design was adopted in this study. The study will be conducted in PSG College of Physiotherapy, among the second year Physiotherapy students. The simple random sampling technique used for this study. The sample consists of 40 Physiotherapy students of PSG College of Physiotherapy. Preassessment was conducted to assess the knowledge regarding Eye Donation among Physiotherapy students. Structured teaching programme on Eye Donation by using audio visual aids. Post assessment of knowledge regarding Eye Donation among Physiotherapy students.

Criteria For Sample Selection:

The samples were selected based on the following inclusion and exclusion criteria.

Inclusion Criteria:

1. The students who were willing to give consent at the time of data collection.
2. The students who were doing under graduate.

Association Between Pretest Scores On Knowledge Regarding Eye Donation Among Physiotherapy Students. n=40

S. No	Demographic Variables	Inadequate (50%)		Moderately adequate (50-75%)		Adequate (>75%)		Calculated value
		F	%	F	%	f	%	
1.	Age							$\chi^2 = 0$ df = 2 NS
	a) 19-20	4	10	26	65	10	25	
	b) 21-22	-	-	-	-	-	-	
2.	Gender							$\chi^2 = 0.451$ df = 2 NS
	a) Male	2	5	9	22.5	3	7.5	
	b) Female	2	5	17	42.5	7	17.5	
3.	Marital status							$\chi^2 = 0$ df = 2, NS
	a) Married	-	-	-	-	-	-	

Exclusion Criteria:

1. The students who were absent on the day of data collection.

Instrument And Tools For Data Collection: The tool constructed in this study consists of 2 sections

Section A : Socio demographic variables including age, religion, area of residence, marital status, sources of information.

Section B: Structured knowledge questionnaire to assess the knowledge and effectiveness of structured teaching program regarding Eye Donation among the Physiotherapy Students. Structured knowledge questionnaire composed of 20 items to assess the knowledge regarding Eye Donation. The multiple-choice question had four alternatives each with one right answer which was allotted a score and zero for every wrong answer has given after taking the pretest. Then posttest is taken on 5th day after providing Structured Teaching Program.

The Total Score Will Be Converted Into Following Ranges:

Level of knowledge	Score
Inadequate knowledge	0-9
Moderate knowledge	10-14
Adequate knowledge	15-20

ETHICAL APPROVAL

Ethical clearance will be obtained from the Institutional Human Ethical Committee (IHEC), IHEC No.24/342, PSG IMS&R and in selected Physiotherapy College in Coimbatore; researcher will obtain consent from the study participants before the data collection procedure. The confidentiality will be maintained throughout the study

RESULTS

Level Of Knowledge Regarding Eye Donation Among Physiotherapy Second Year Students. n=40

S. No	Level of knowledge	f	%
1.	Inadequate knowledge (0-9)	4	10
2.	Moderate knowledge (10-14)	26	65
3.	Adequate knowledge (15-20)	10	25

It reveals that 4 students (10%) had inadequate knowledge towards examination, 26 students (65%) had moderate knowledge and 10 students (25%) had adequate knowledge.

Association Between Pre-test And Post-test Level Of Knowledge Regarding Eye Donation Among Students With Their Demographic Variables.

H_1 : There will be a significant difference between the pre -test and post-test level of knowledge regarding Eye Donation among Physiotherapy students.

Table Mean, SD And Paired 't' Test Value Of Level Of Knowledge Of Study Participants Regarding Eye Donation. n=40

S. No	Paired test	Mean SD	t value
1.	Pre test	13.02±2.29	t = 9.02
2.	Post test	18.8±1.95	S**

Note: **Significant at $p < 0.05$

The table 4.3.1 shows that the pretest mean, standard deviation score was 13.02±2.29 whereas the post-test mean, standard deviation score was 18.8±1.95 respectively. The difference was 5.78, the calculated t value was 9.02 which was found to be statistically significant at $p < 0.05$. The clearly infers that interactive program regarding Eye Donation among Physiotherapy students was found to be effective. Hence the research hypothesis H_1 was retained.

	b) Unmarried	4	10	26	65	10	25	
4.	Religion							$\chi^2 = 2.5$ df = 6 NS
	a) Hindu	3	7.5	21	52.5	10	25	
	b) Christian	1	2.5	1	2.5	-	-	
	c) Muslim	-	-	4	10	-	-	
	d) Others	-	-	-	-	-	-	
5.	Have you heard about Eye Donation?							$\chi^2 = 1.11$ df = 2 NS
	a) Yes	4	10	24	60	10	25	
	b) No	-	-	2	5	-	-	
6.	Source of information							$\chi^2 = 9.58$ df = 10 NS
	a) Television	3	7.5	13	32.5	6	15	
	b) Radio	-	-	-	-	-	-	
	c) Newspaper	-	-	-	-	1	2.5	
	d) Family members	-	-	6	15	2	5	
	e) Health care workers	-	-	6	15	1	2.5	
	f) Others	1	2.5	1	2.5	-	2.5	

P<0.05, S- Significant, N.S- Not significant.

Table- showed that there is no significant association between age, gender, marital status, religion, heard about eye donation, source of information.

MAJOR FINDINGS

The study, the findings revealed that in pre-test knowledge score, 4 students (10%) had inadequate knowledge towards examination, 26 students (65%) had moderate knowledge and 10% students (25%) had adequate knowledge. The mean and standard deviation of the pre-test was 13.02±2.29 and post-test was 18.8±1.95 respectively. The mean differences score was 5.78. The calculated t value was 9.02 which was found to be statically significant at p>0.05.

CONCLUSION

The study aimed at assessing the productiveness of structured teaching program about Eye Donation on physiotherapy students hence the investigator concluded that there was significant improvement in the knowledge among physiotherapy students after administration of knowledge intervention.

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