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Effectiveness of planned group teaching programme on eye donation among adults in a selected rural community of Mangalore

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Abstract

Background: Vision is a person's most highly valued sense. Eye is the highly sensitive, specialized organ subjected to various disorders, many of which lead to impaired vision. It affects an individual's independence in self-care, work, lifestyle, sense of self-esteem, safety and overall quality of life. In India, there are lakhs of children and adults suffering from blindness. Corneal transplantation through donated eyes helps restore the vision for people with blindness [1].

Objective: To evaluate the effectiveness of planned group teaching programme on eye donation among adults in terms of gain in knowledge score.

Methodology: The research design was pre-experimental, one group pre-test, post-test design. The sample comprised of 60 adults selected by convenience sampling. A structured interview schedule was used to collect the data.

Result: Most (88.3%) of the subjects in the pre-test had poor knowledge whereas in the post-test all the subjects (100%) had scored good knowledge.

Conclusion: The study concluded that the planned group teaching program was found effective in increasing the knowledge among adult regarding eye donation.

Keywords: Effectiveness, planned group teaching program, adults, eye donation, knowledge

Introduction

Vision is the most important sense because it allows interacting freely with the environment and enjoying the beauty of life. Eye is sometimes called the "mirror of soul," The eye often reflects physical health [2]. Once vision becomes significantly limited, it influences the activities of daily living. Even simple tasks become difficult to perform. The problem of blindness all over world is as old as mankind itself. It has been estimated that every five seconds one individual goes blind in the world [3]. Blindness was first highlighted in India during the 1921 census that indicated blindness prevalence rate of 172/1,00,000 population. In 1944, the Bhore Committee estimated that there were 2 million blind individuals in the country. In 1963, trachoma pilot project estimated there were 4.5 million economically blind and an equal number of totally blind persons in the country. During 1971-74, ICMR Blindness Survey projected that 9 million were economically blind and 55% were totally blind in the country. During 1986-89, the WHO reported that 12 million economically blind and 8 million were identified as blind in one eye [3]. According to the latest findings of the Eye Bank Association of India during 2005 there were around 10 million blind people, out of which 2 million suffered from corneal blindness with more than 60% of them being children below the age of 12 years [6]. This is the world's largest burden and every year nearly 20,000 to 25,000 or more people fall victim to corneal blindness [8].

The incidence of blindness in Karnataka was approximately 1%, that is, 6 lakhs in 2008-2009. The above statistics reveal drastic increase in blindness prevalence rate. There is an inherent demand for nearly one million eyes and an estimated 20,000 persons are added to this backlog each year. As emphasised by these statistics there is great need for eye donation in India [9]. Five thousand operations are being performed every year. In spite of having professional surgeons, corneal transplantation cannot be carried out due to lack corneal donors. This may be due to lack of awareness in the general public, absence of motivation, and social and religious taboos [10].

In case of death of any family member or friend we should keep in mind to call the eye bank. Lots of eyes are getting wasted, either through burial of the dead body or through burning. Instead of this, eyes can be donated so that a corneally-blind person can get vision and will be able to see this beautiful world through your eyes! Each pair of donated eyes gives vision to two corneally-blind persons! Otherwise one valuable organ will become waste, so "donate your eyes to relive after death [7].

Material and Methods

Research Approach: Evaluative research approach

Research Design: The research design was pre-experimental, one group pre-test, post-test design.

Setting: The study was carried out in a rural community of Mangalore.

Population: Adults of rural community between 20- 60 years of age

Sample and Sample size: The sample comprised of 60 adults.

Sampling Technique: Convenience sampling Technique.

Results

Demographic variables: Majority of the subjects (30%) were in the age group of 30- 40 years; majority of the subjects (61.7%) were female; most of the subjects (40%) belonged to Hindu religion; majority of the subjects (33.3%) had studied up to secondary education; most of subjects (31.7%) were unemployed.

Table 1: Frequency and percentage distribution of pre-test knowledge score regarding eye donation among adults.

N=60

Pretest knowledge score	Frequency	Percentage	Mean	SD
Good (76% & above)	-	-	17.48	3.306
Average (51-75%)	7	11.7		
Poor (50% & below)	53	88.3		

The data from the above table revealed that majority (88.3%) of the subjects in the pre-test had poor knowledge regarding eye donation among adults and also it depicted that the mean knowledge score was 17.48 with Standard deviation 3.306.

Table 2: Frequency and percentage distribution of Post-test knowledge score regarding eye donation among adults.

Pretest knowledge score	Frequency	Percentage	Mean	SD
Good (76% & above)	60	100.00	2.212	94.51
Average (51-75%)	-	-		
Poor (50% & below)	-	-		

The data presented in the above table revealed that all the study participants 60(100%) of the had good knowledge score regarding eye donation.

Table 3: Range, mean, median, SD, and mean percentage of pre-test and post-test knowledge score of subjects

N = 60

Aspect	Range	Mean	Median	SD	Mean%
Pre-test	12-25	17.48	17.00	3.306	39.73
Post-test	37-44	41.58	41.50	2.212	94.51

The data presented in the above table shows that the respondents' post-test knowledge scores ranged from 37- 44 with mean of 41.58 is higher than their pre-test knowledge score, which ranged from 12-25 with mean of 17.48. The dispersion of the pre-test score (SD = 3.306) is more than that of their post-test score (SD = 2.212) which shows that the teaching is effective.

Testing of hypotheses

All hypotheses were tested at 0.05 level of significance.

To find the significance of mean difference between pre-test and post-test knowledge score of adults who received planned group teaching programme on eye donation the following null hypothesis was stated:

H_{01}: There is no significant difference between mean pre-test and post-test knowledge scores of subjects before and after receiving planned group teaching programme on eye donation.

The above hypothesis was tested using paired 't' test.

Table 4: Paired 't' test showing the significance of mean difference between pre-test and post-test knowledge score of adults who received planned group teaching programme

N = 60

Group	Mean knowledge score		Mean difference	SD of difference	SE	df	't' value
	Pre-test	Post-test					
Adults	17.48	41.58	24.10	3.203	0.41	59	58.28*

Maximum score = 44 t_{59}= 2.0, P < 0.05 * Significant

It is evident from the data presented in Table 4 that the calculated 't' value (58.28) is greater than the table value (2.0). Hence the null hypothesis was rejected and the research hypothesis is accepted at 0.05 level of significance. The mean difference between pre-test and post-test knowledge score is a true difference and not a chance difference. This indicates that the planned group teaching programme is significantly effective in increasing the knowledge of adults regarding eye donation.

H_{02}: There will be no significant difference between pre-test and post-test knowledge score of adults on various areas of eye donation.

Table 5: Area wise mean, mean difference, SD of difference and 't' value of pre-test and post-test knowledge score of subjects on eye donation

N = 60

Area	Mean		Mean difference	SD difference	SE	't' value
	Pre-test	Post-test				
General information	0.68	0.88	0.20	0.40	0.080	2.50*
Information regarding blindness	0.44	1.28	0.84	0.37	0.074	11.35*
Procedure for pledging the eyes	1.60	2.72	1.12	0.78	0.156	7.17*
Procedure involved in removal of eyes	0.28	0.76	0.48	0.25	0.050	9.60*

Max score = 44 $t_{(59)} = 2.00$, $p<0.05$ * Significant

The above hypothesis is tested using paired't' test. The data in table shows that the calculated't' values for all areas are higher than the table value at 0.05 level of significance. Hence the null hypothesis is rejected and research hypothesis is accepted.

Table 6: Chi-square test showing the association between pre-test knowledge scores and demographic characteristics of subjects

Sl. No.	Variables	Below median	Above median	χ^2 value	df	Level of significance
1	**Age (in years)**					
	20 – 40	14	20	0.775	1	**
	40- 60	12	14			
2	**Gender**					
	Male	11	12	0.307	1	**
	Female	15	22			
3	**Religion**					
	Hindu	14	10	3.716	1	**
	Other than Hindu	12	24			
4	**Educational qualification**					
	Illiterate	11	4	14.747	1	*
	Primary and above	15	30			
5	**Occupation**					
	Unemployed	11	8	7.103	1	*
	Employed	15	26			
6	**Source of information regarding eye donation**					
	TV	23	24	1.820	1	**
	Others	3	10			
7	**Reason for not pledged the eyes**					
	Fear and disfigurement of face	19	23	2.025	1	**
	Other reasons	7	11			

$\chi^2_{(1)} = 3.84$, $p<0.05$ * Significant ** Not significant

The data presented in Table 6 shows the association between knowledge score of subjects and the demographic variables. The chi-square value of educational qualification is significant. The calculated chi-square value ($\chi^2_{(1)}=14.747$, $p<0.05$) is more than table value ($\chi^2_{(1)}=3.84$), and the chi-square value of occupation is significant, the calculated 't' value ($\chi^2_{(1)}=7.103$, $p<0.05$) is more than table value ($\chi^2_{(1)}=3.84$). Hence, it is inferred that there is a significant association between educational qualification, occupation and pre- test knowledge score of subjects. However, the chi-square value of other variables age, gender, religion, source of information and reason for not pledged the eyes are not found significant at 0.05 level of significance, thereby suggesting that there is no association between these above mentioned variables with pre -test knowledge score of subjects.

Recommendations

1. The study can be conducted on a larger sample.
2. A comparative study can be conducted to find out the effectiveness of planned teaching programme between urban and rural community.
3. An evaluatory study can be conducted to find out the effectiveness of planned group teaching programme among two different groups of health professionals.

Interpretation and Conclusion

The finding of this study support the need for conducting health education, counselling and mass awareness programmes on eye donation to the public. The study proved that adults had poor knowledge on eye donation. After administration of the planned group teaching programme their knowledge improved to a remarkable extent. The findings of the study showed that the planned group teaching programme was effective in increasing the knowledge of adults on eye donation.

Conflict of Interest

Not available

Financial Support

Not available

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