Research Paper

"A Study to Assess the Effectiveness of Structured Teaching Programme on Warning Signs of Cataract Among Generl Public At Selected Community Area Puducherry"

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Abstract

The purpose of this study the was to evaluate the efficacy of a structured teaching program in raising awareness of age related cataract warning signs. A cataract is clouding of age-related cataract warning signs. A cataract is clouding of the lens, which is located behind the colored position of the eye and is responsible for producing clear , sharp images on the retina . Methods: A population-based, cross-sectional study was conducted in Kalitherthalkuppam from March to June 2023. A total of 100 subjects (34men, 66 women) over the age of 40 years from both villages were included in our study. The prevalence of cataract in the study was 65.7%. The main Risk factors: were atopy (25.6%), idiopathic (19.1%), high myopia (19.5%), and childbearing (19.6%). The main barriers to cataract health were age, sex, and type 2 diabetes mellitus (LOCS) III systems. Multivariate logistic regression models were used to evaluate the association between these risk factors and cataract prevalence (p0.001). Results: The overall prevalence of senile cataract was 35.8%, followed by the age-adjusted cataract prevalence of 85.3%. There were no significant differences in the prevalence between the two groups (p>0.05). Conclusion: The findings of this present study suggest that structured teaching programs are effective in mitigating the risk of cataract.

Keywords: Warning signs of Cataract , level of knowledge, structured instructional module

I. INTRODUCTION

Cataracts are a common eye condition characterized by the clouding of the eye's natural lens, which lies behind the iris and the pupil. This clouding leads to a decrease in vision, often described as looking through a frosty or fogged-up window. Cataracts can develop in one or both eyes, but they do not spread from one eye to the other.

The development of cataracts is typically a slow process, often related to aging. As we age, the proteins in the lens can begin to clump together, forming cloudy areas. Although aging is the most common cause, cataracts can also result from factors such as diabetes, smoking, excessive alcohol consumption, prolonged exposure to ultraviolet sunlight, and certain medications like corticosteroids.

Initially, the cloudiness in vision caused by cataracts may affect only a small part of the lens and might not be noticeable. Symptoms of cataracts include blurry vision, difficulty with night vision, sensitivity to light and glare, seeing halos around lights, fading or yellowing of colors, and frequent changes in eyeglass or contact lens prescriptions.

Diagnosing cataracts involves a comprehensive eye examination, which includes tests for visual acuity, dilated eye examination, and tonometry to measure the pressure inside the eye. Early detection is crucial as it allows for timely intervention and management.

Cataract surgery is one of the most common and successful procedures performed worldwide, restoring clear vision to millions of people each year. As our understanding and technology advance, the prognosis for individuals with cataracts continues to improve, allowing for better quality of life and prolonged visual acuity.

AIM OF THE STUDY
The aim of the study was to assess the effectiveness structured teaching program on warning signs of cataract .

STATEMENTOFTHEPROBLEM:
A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ONWARNING SIGNS OF CATARACT AMONG GENERAL PUBLIC AT SELECTED COMMUNITY AREA PUDUCHERRY .

OBJECTIVES
● Toassesstheeffectivenessofwarningsignsofcataractingeneralpublic.
● Toevaluatetheeffectivenessofstructuredteachingprogrammeonwarningsignsofcataract among general public.
● Toassociatebetweeneffectivenessofwarningsignsofcataractamonggeneralpublicwiththeir   selected demographic variables.

HYPOTHESIS
● Therewillbeasignificantdifferencein thepreandpostlevelofknowledgeonwarning signsof cataract among general public.
●   Therewillbeasignificantassociationbetweenthelevelofknowledgeandtheirselected demographic variables.

Assumptions:
● Thecommunitymemberswillhavethelevelofeffectivenessregardingthewarningsignsof cataract.
● Thetoolpreparedforthestudywillbesufficientforassessingtheeffectivenessofthecommunity   members regarding the warning signs of cataract.

II.   REVIEW OF LITERATURE

M.r.praveen et al., (2017) The aim of this study was to identify risk factors for the development of cataract in young patients. The study was undertaken at Iladevi Cataract and IOL Research Centre, Gujarat observational study The mean age of the patients was 40.2 ± 4.6 years; there were 202 men. The major risk factors were atopy (25.6%), idiopathic (19.1%), high myopia (12.4%), atopy with steroid intake (10.9%), steroid usage (7.4%), sunlight exposure (3.8%), and diabetes mellitus (3.2%). PSC was observed in 53.5% eyes. Multinomial logistic regression revealed that atopy ($P=0.016$), steroid usage ($P=0.100$), and diabetes mellitus ($P=0.076$) documented higher odds for PSC. High myopia ($P<0.001$) and sunlight exposure ($P=0.003$) documented higher odds for nuclear cataract. Atopy was found to be the most common risk factor associated with the development of cataract in young individuals. PSC was the predominant type of cataract prevalent in young patients**.**

R.c.milton et. al., (2019)was conducted study on Prevalence and aetiology of cataract in Punjab. Three districts in the Punjab plains were surveyed in 2018-9 for senile cataract and potential risk factors. The prevalence of senile cataract was 15.3% among 1269 persons examined who were aged 30 ang older, and 4.3% for all ages. These figures confirmed previous reports of high prevalence. The prevalence was 1% for ages 30-49 and increased markedly in the sixth and seventh decades to 67% for ages 70 and older. Univariate age-adjusted analyses of selected socioeconomic, demographic, dietary, and other variables suggested that a higher prevalence was associated with being widowed, low education, use of rock salt in cooking, infrequent consumption of various protein foods (beans and lentils, milk, eggs, and curd), short height, and low weight. Multivariate analysis further suggested low total protein consumption as a risk factor that may account for as much as 40% of the excess prevalence of Punjab cataract over that in a US population study.

III.   METHODOLOGY

The research approach used for this study was quantitative research approach. A descriptive research design was used to assess the warning signs of cataract among general public at selected community area Puducherry . By using purposive sampling technique 100 sample was selected for the present study. The tool consists of demographic data and questionnaire.

DESCRIPTION OF TOOL:
Since the objectives of the study was to assess and compare the knowledge of the general public with their demographic data. It was decided that the questionnaire would have two selections namely section -A demographic data section, section – B self-structured questionnaire.

SECTION A:
It consists of social demographic data including age, gender , religion, educational status.
Occupational status, marital status , family income per day, dietary pattern, types of family, previous knowledge regarding cataract and signs .

SELECTION B:
It consist of knowledge items 100 objectives type of multiple choice questions with four distractions. This knowledge questions consists of definition,types, causes , warning signs of cataract. Diagnostic features , treatment of cataract , complication of catract , preventive measures of cataract.

SCORING INTERPRETATION:

PRE-TEST

LEVEL OF KNOWLEDGE	SCORING	PERCENTAGE
Inadequate knowledge	38	76%
Moderate knowledge	12	24%
Adequate knowledge	0	0

POST-TEST

LEVEL OF KNOWLEDGE	SCORING	PERCENTAGE
Inadequate knowledge	0	0
Moderate knowledge	16	32%
Adequate knowledge	34	68%

RESEARCH APPROACH:
Research approach was the basic procedure for conducting the study. A quantitative research approach was adapted for this study.

RESEARCH DESIGN:
A pre experimental one group pretest and post-test divided was adopted for their study.

POPULATION:
The population is referred to as a group of all the elements like individuals or objects that are available in the same geographical area. The target population for this study comprises of general public, Puducherry.

SETTING OF THE STUDY:
The study was conducted at, Kalitheerthalkuppam, Puducherry.

SAMPLE:
The sample for the study comprises of general public who lives inKalitheerthalkuppam, Puducherry.

SAMPLE SIZE:
The sample size consists of 100 people.

SAMPLING TECHNIQUE:
Sampling technique is defined as the process of selecting a group of people or the other elements with which conduct a study. Convenient sampling technique is used for the present study.

SETTING OF THE STUDY:
The study was conducted in selected area at Kalitheerthalkuppam at Puducherry

SAMPLE SELECTION:
Inclusion criteria:

- Coming people belong to general public.
- Both gender (male and female)

Exclusion criteria:

- Sick
- Illness
- Absent during the time of data collection.

DATA COLLECTION PROCEDURE:

The data was collected in the selected community area, Kalitheerthalkuppampuducherry, formal approval obtained. The purposes of the study was explained to the participant before starting the data collection. Informed consent was obtained from the participants after explaining the purpose of the study. 100 general public was selected by convenient sampling technique to fullfill the criteria a pretest was conducted using a knowledge questionnaire on warning signs of cataract. A structured teaching programme was administered to the samples. After 7 days post test was conducted and the data was collected with the same tool

IV. Results:

The outcome for demographic variables among general publicara as follows .Out of the 100 , generalpublicwhowereinterviewed,Majorityofthepeoples29(58%)agelessthan50yearsold, majority of publics whose gender was 33(66%) male, majority of general public religion 42(84%) in Hindu, those majority of people educational status 16 (32%) uneducated, those occupational status20(40%)inunemployed,maritalstatus ofthesampleswas33(66%)married,familyincome per day 25(50%) Rs 750-900/, those dietary pattern 30(60) in mixed, type of family was 32 (64%) joint family and those no 41(82%) have previous knowledge regarding cataract and its warning signs. thefrequencyand percentage wise distribution for thelevel of knowledgeon pretest mostof the peoples 38 (76%) having inadequate level of knowledge, 12 (24%) having moderate level of knowledge.After done the structured teaching programme the post test was conducted of them 34 (68%) adequate knowledge and 16 (32%) moderate knowledge. the effectiveness on level of language for the mean and standard deviation for pre test 5.64+3.895 and post test 20.0+7.434, those less than 0.05 is significant and 0.005** highly significant.

Frequency and percentage wise distribution of demographic variables among patients.

(N=100)

SL.NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1	**AGE IN YEARS**		
	<50 YEARS	29	58
	50_60 YEARS	9	18
	60_70 YEARS	12	24
	ABOVE 70 YEARS	0	0
2	**GENDER**		
	FEMALE	33	66
	MALE	17	34
	OTHERS	0	0
3	**RELIGION**		
	HINDU	42	84
	MUSLIM	8	16
	CHRISTIAN	0	0
	OTHERS	0	0
4	**EDUCATIONAL STATUS**		
	UNEDUCATED	16	32
	PRIMARY	12	24
	HIGHER SECONDARY	12	24
	GRADUATE	10	20
5	**OCCUPATIONAL STATUS**		

	GOVERNMENT JOB	6	12
	UNEMPLOYED	20	40
	SELF EMPLOYED	12	24
	PRIVATE JOB	12	24
6	**MARITAL STATUS**		
	MARRIED	33	66
	UNMARRIED	0	0
	WIDOW	17	34
	DIVORCED	0	0
7	**FAMILY INCOME PER DAY**		
	Rs. 2000 & ABOVE	15	30
	Rs. 750_ 999/-	25	50
	Rs.300_ 499/-	10	20
	LESS THEN Rs. 100/-	0	0
8	**DIETARY PATTERN**		
	VEGETARIAN	6	12
	NON VEGETARIAN	14	28
	MIXED	30	60
9	**TYPES OF FAMILY**		
	NUCLEAR FAMILY	18	36
	JOINT FAMILY	32	64
10	**PREVIOUS KNOWLEDGE REGARDING CATARACT AND ITS WARNING SIGNS**		
	YES	9	18
	NO	41	82

Effectivenessofwarningsignsofcataractbycomparingpreandpostlevelofknowledge among general public.

(N=100)

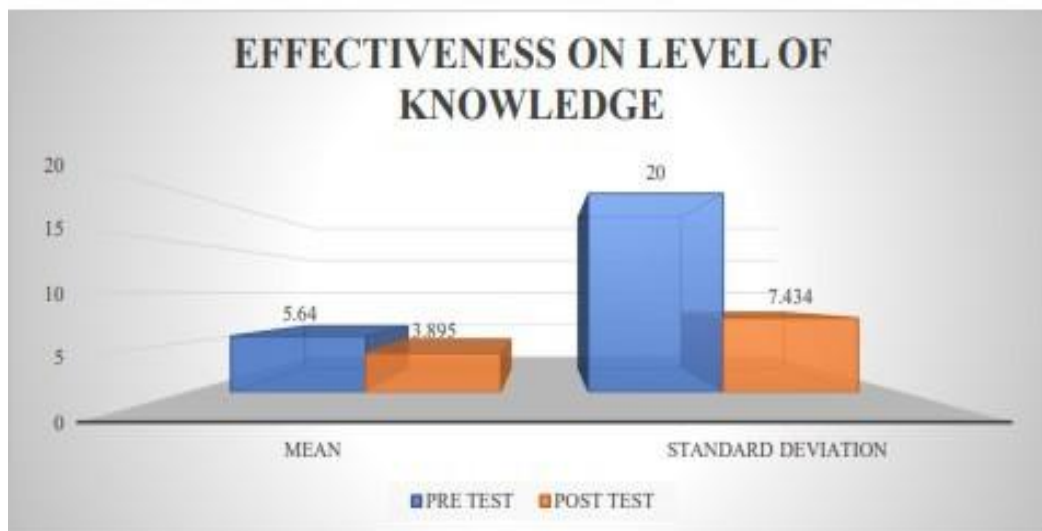| GROUP	TEST	MEAN	STANDA R D DEVIAT ON	MEAN DIFFERE NC E	't'VALUE Paired-t test	Df	'p' VALUE
LEVELOF KNOWLEDG E [Effectiveness of warning signsof cataractby	**Pre assessme nt**	5.64	20.000	14.36	-12.10	49	2.50e-16
comparing pre and post andpost level Knowledge among general general public]	**Post assessment**	3.895	7.434				

LEVEL OF KNOWLEDGE
PRE TEST AND POST TEST VALUES

Table–:Associationbetweenthepreassessmentandpostassessmentlevelofknowledge regarding selected warning signs of cataract among general public with selected demographic variables.

(N=100)

SL.	DEMOGRAPHIC VARIABLES	PRE TEST				POST TEST				
		INADEQUATE		MODERATE		ADEQUATE		MODERATE		CHI SQUARE Df P value
		N	%	N	%	N	%	N	%	
1	**AGE IN YEARS**									
	<50 YEARS	24	48	5	10	23	46	6	12	**20.472** **2** **0.00001**** S**
	50_60 YEARS	6	12	3	6	9	18	0	0	
	60_70 YEARS	8	16	4	8	2	4	10	20	
	ABOVE 70 YEARS	0	0	0	0	0	0	0	0	
2	**GENDER**									
	FEMALE	25	50	8	16	21	42	12	24	0.849 1 0.357 (NS)
	MALE	13	26	4	8	13	26	4	8	
	OTHERS	0	0	0	0	0	0	0	0	
3	**RELIGION**									
	HINDU	34	68	8	46	30	60	12	24	1.418 1 0.234 NS
	MUSLIM	4	8	4	8	4	8	4	8	
	CHRISTIAN	0	0	0	0	0	0	0	0	
	OTHERS	0	0	0	0	0	0	0	0	
4	**EDUCATIONAL STATUS**									
	UNEDUCATED	14	28	2	4	14	28	2	4	**29.703** **3** **0.0001****
	PRIMARY	10	20	2	4	12	24	0	0	

	HIGHER SECONDA RY	12	24	0	0	8	16	4	8	**S**
	GRADUAT E	2	4	8	16	0	0	10	20	
5	**OCCUPAT IONAL STATUS**									
	GOVERN MENT JOB	2	4	4	8	2	4	4	8	**13.235 3** **0.004** S
	UNEMPLO YED	14	28	6	12	10	20	10	20	
	SELF EMPLOYE D	10	20	2	4	12	24	0	0	
	PRIVATE JOB	12	24	0	0	10	20	2	4	
6	**MARITAL STATUS**									
	MARRIED	28	56	5	10	23	46	10	20	0.128
	UNMARRI ED	0	0	0	0	0	0	0	0	1
	WIDOW	10	20	7	14	11	22	6	12	0.720 NS
	DIVORCE D	0	0	0	0	0	0	0	0	
7	**FAMILY INCOME PER DAY**									
	Rs.2000& ABOVE	12	24	3	6	7	14	8	16	**13.358 2** **0.001** S
	Rs.750_ 999/-	22	44	3	6	23	46	2	4	
	Rs.300_ 499/-	4	8	6	12	4	8	6	12	
	LESS THENRs. 100/-	0	0	0	0	0	0	0	0	
8	**DIETARY PATTERN**									
	VEGETAR IAN	5	10	1	2	4	8	2	4	2.906
	NON VEGETAR IAN	11	22	3	6	12	24	2	4	2 0.234
	MIXED	22	44	8	16	18	36	12	24	NS
9	**TYPESOF FAMILY**									
	NUCLEAR FAMILY	10	20	8	16	10	20	8	16	2.002 1 0.157 NS
	JOINT FAMILY	28	56	4	8	24	48	8	16	

10	PREVIOU S KNOWLE DGE REGARDI NG CATARAC TANDITS WARNIN G SIGNS									
	YES	8	16	1	2	7	14	2	4	0.482 1 0.487
	NO	30	60	11	22	27	54	14	28	NS

V.   CONCLUSION AND RECOMMENDATIONS:

CONCLUSION:

The study aimed to assess the effectiveness of a structured teaching program on the warning signs of cataract among the general public in a selected community area in Puducherry. The quasi- experimental design with pre-test and post-test assessments revealed significant findings. Initially, 76% of participants exhibited inadequate knowledge about cataract warning signs, while 24% demonstrated moderate knowledge. Post-intervention, 68% of participants achieved adequate knowledge, and 32% showed moderate knowledge, indicating a substantial improvement. Statistical analysis demonstrated a significant increase in the mean knowledge scores from 5.64 (pre-test) to 20.0 (post-test), with standard deviations of 3.895 and 7.434, respectively, underscoring the program's effectiveness.

NURSING IMPLICATION:

The study had implications for nursing practice, nursing education, and nursing research and nursing administration.

NURSING PRACTICE:

Staff nurse working in the hospital and in community should practice the health education as an integral part of nursing profession. This study was developed by the investigator can also be used by the nurses to educate and instruct about warning signs of cataract among general public through this effective study it can also be improved in the community settings also.

NURSING EDUCATION:

The community nursing curriculum needs to strengthened to enable the nursing students to know about the warning signs of cataract. The study need to organize a workshop, in-service education programme to nurses, students and also for the paramedical workers. Nursing student should be provided with adequate opportunities in developing skill in handling such clients and how to identify their common cataract problems and help them to promote a comfort and well being.

NURSING SERVICE:

The staff nurse working in the hospital should have enough knowledge and special skills to identify cataract among general public as early as possible and to take immediate action on overcoming such problems.
 Nurse as counselor and educator should provide adequate guidance and knowledge on warning signs of cataract among general public.

NURSING ADMINISTRATION:

Nurse administrator can make necessary policies to implement the warning signs of cataract to identify cataract among general public.
Nurse administrator can organize in-service education programme on the warning signs of cataract among general public.
Nurse administrator give attention on proper selection, placement and effective utilization of the nurses in all areas with their ability in education regarding the warning signs of cataract among general public.

NURSING RESEARCH:

The findings of the study help the staff nurses and peoples to develop inquiry by providing baseline. The general aspect of the study result can be made by further replication of the study.
A nurse researcher can provide a knowledge regarding warning signs of cataract among general public.

RECOMMENDATIONS:
☐ Similar study can be conducted in other parts of the country.
☐ The same study can be conducted with the large samples.
☐ The same study can be conducted in different setting

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