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"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ALZHEIMER'S DISEASE AMONG ELDERLY RESIDING AT SELECTED OLD AGE HOMES IN AHMEDABAD CITY."

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ABSTRACT:

Study: Investigators conducted "a study to assess the effectiveness of structured teaching programme on knowledge regarding Alzheimer's disease among elderly residing at selected old age homes in Ahmedabad city."

Background:

Alzheimer's disease is one of the debilitating chronic diseases among older persons, it is an irreversible condition that leads to progressive deterioration of cognitive, intellectual, physical and psychosocial functions. India is home to 1.37 billion people, according to latest statistical data and India is the world's most populous country in 2023. Its population is also rapidly aging. The share of individuals aged 60 years or older is projected to increase to nearly 20% of the total Indian population by 2050 (319 million) because age is the strongest and best-known risk factor for dementia, India faces an alarming potential increase in the number of people with Alzheimer's. By administrating structured knowledge program regarding Alzheimer's 's disease, it has achieved the desired effect in improving the knowledge regarding Alzheimer's 's disease.

Objectives:

1. To assess the pre-test level of knowledge on Alzheimer's disease among elderly residing at selected old age homes.
2. To assess the post-test level of knowledge on Alzheimer's disease among elderly residing at selected old age homes.
3. To evaluate the effectiveness of structured teaching programme by comparing pre-test and post- test knowledge level on Alzheimer's disease among elderly residing at selected old age homes.
4. To find out association between pre-test knowledge level among selected demographic variables regarding Alzheimer's disease among elderly residing in old age homes.

Research Methodology:

Quantitative research approach was used with pre-experimental (one group pre-test and post-test) research design. With Nonprobability convenient sampling technique 30 samples selected. Objectives and selected demographic variables were assessed by modified structured teaching programme. Afterward structured teaching programme was administrated. Post test was carried after 4 days.

Result:

Revealed in pre-test, average knowledge score was 9.93 With standard deviation of 1.65 whereas in post test average knowledge score was 18.10 With standard deviation of 3.04. The significance of the difference between the pre-test and post-test knowledge scores was statistically tested using a paired 't' test, and it was found to be 13.952, which was significant at the 0.05 level.

Conclusion:

There was significant increase in the knowledge score of Alzheimer's disease among elderly after administration of the structured teaching programme. Hence it was concluded that structured teaching programme was effective in improving knowledge score of Alzheimer's disease among elderly residing at selected old age homes in Ahmedabad city.

Introduction:

India previously had lower population with Alzheimer's disease. It was approximately 4% compared to the Alzheimer's disease patient in the United States above the age group of 65 years. In 2011, the population over 60 years of age comprised 8.6% of the total population. With falling population growth rates this share is only expected to increase further in the coming decades. As the population ages, the burden of geriatric diseases will start to feel heavier. Of all the geriatric diseases, India is perhaps most under prepared to tackle the burden of degenerative diseases like Alzheimer's and dementia. This is due to a lack of awareness compounded by lack of specialists in geriatric diseases. It gradually develops with age 65 years of age. So, an increase in knowledge is important in elderly people. A comprehensive study on Alzheimer's in India is imperative to unravel the complex interplay of genetic, environmental, and lifestyle factors influencing the disease within this specific context. Such research not only contributes to the global pool of knowledge but also addresses the urgent need for tailored interventions, awareness campaigns, and support systems that resonate with the Indian population. Thus, the researchers selected the study to evaluate the effectiveness of structured teaching program on knowledge regarding Alzheimer's 's disease among elderly residing at selected old age home in Ahmedabad city. As Alzheimer's disease is the most common form of dementia characterized by progressive degeneration of cognitive abilities. Even within the field of medicine, research in Alzheimer's diseases remain low. Most of our existing knowledge and estimates of the incidence of Alzheimer's is lacking. For a disease like Alzheimer's, whose risk-factors are genetic, lifestyle, and environmental, we need to conduct clinical trials specific to India and not rely on those conducted in developed countries. The burden of disease is shared and reduced by increasing the awareness of the disease. An individual can lead a normal happy life only if he has a sound intellectual capacity with good memory. Any impairment to his\her memory will have a direct destructive effort on the quality of his living standards, thus this condition has been chosen for the present study. We choose this topic for research because we wanted to understand and find ways to help people facing memory problems and confusion. Understanding Alzheimer's helps researchers to provide better care, support, and empathy to those affected. This research equips nursing students with practical skills to address memory issues, enhancing their abilities as future caregivers. By engaging in one-on-one interactions, researchers patiently address individual concerns and queries from the elderly residents. Additionally, it raises awareness about a prevalent issue in India's aging population, driving improvements in Alzheimer's care and overall quality of life for the elderly.

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RESULT:

4.3.1: Analysis and interpretation of the demographic variables of the samples:

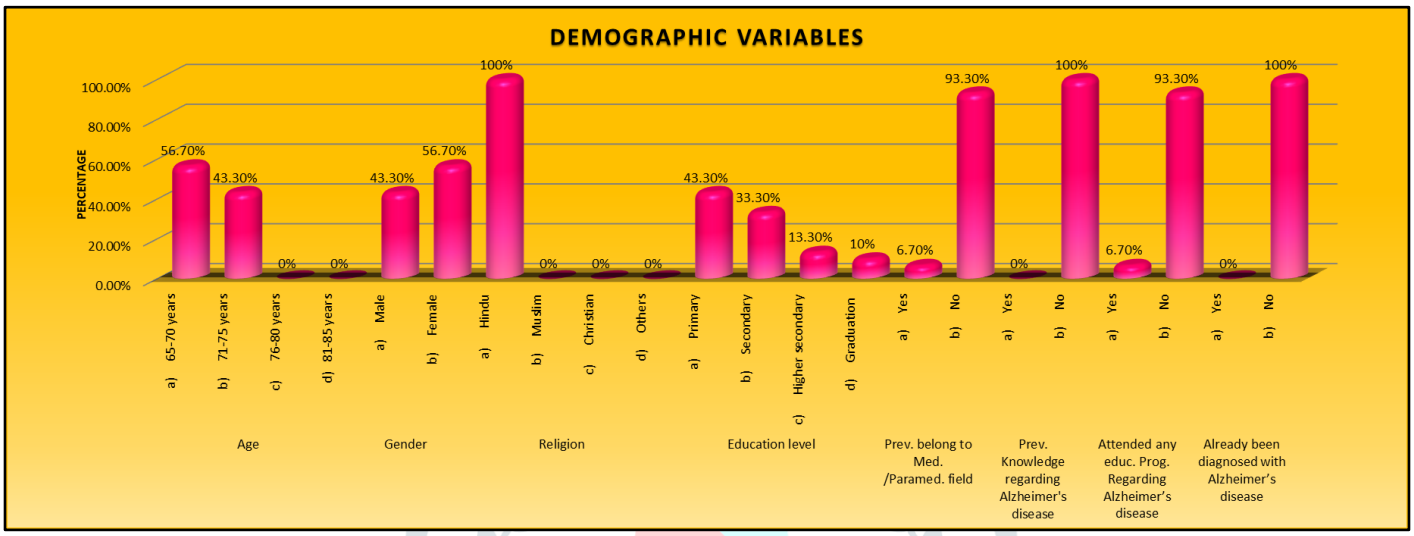
Table 4.1.:-Frequency and Percentage wise distribution of samples based on demographic variables.

[N=30]

SR. NO.	DEMOGRAPHIC VARIABLES		FREQUENCY	PERCENTAGE	MEAN
1.	Age	65-70 years 71-75 years 76-80 years 80-85 years	17 13 0 0	56.7% 43.3% 0% 0%	0.57 0.43 0 0
2.	Gender	Male Female	13 17	43.3% 56.7%	0.43 0.57
3.	Religion	Hindu Muslim Christian Others	30 0 0 0	100% 0% 0% 0%	1 0 0 0
4.	Education level	Primary Secondary Higher secondary Graduation	13 10 4 3	43.3% 33.3% 13.3% 10%	0.43 0.33 0.13 0.10
5.	Previously belong to medical /paramedical field	Yes No	2 28	6.7% 93.3%	0.07 0.93
6.	Previous knowledge regarding Alzheimer's disease.	Yes No	0 30	0% 100%	0 1
7.	Attended any educational programme regarding Alzheimer's disease.	Yes No	2 28	6.7% 93.3%	0.06 0.93

8.	Already been diagnosed with Alzheimer's disease.	Yes No	0 30	0% 100%	0 1

Table 4.1 shows the distribution of samples based on demographic variables In which 17 (56.7%) samples belonged to the age group of 65-70 years, 13 (43.3%) samples belonged to the age group 71-75 years. As regard to gender: 13 (43.3%) samples were male and 17 (56.7%) samples were female. According to religion: all 30 (100%) of the samples belonged to Hindu religion. As regard to educational level: 13 (43.3%) of samples belonged to primary, 10 (33.3%) of samples belonged to secondary, 4 (13.3%) of samples belonged to higher secondary and 3 (10%) of samples belonged to graduation. According to the parameter belonging to Medical/ Paramedical field: 2 (6.7%) of samples belonged to medical/ paramedical field & 28 (93.3%) of samples did not belong to medical/ paramedical field. According to the previous knowledge about Alzheimer's disease: all 30 (100%) samples did not have any previous knowledge regarding Alzheimer's disease. According to any educational program 28 (93.3%) of samples did not attend and 2 (6.7%) of samples attended educational programme. According to previously diagnosed with Alzheimer's disease: all 30 (100%) samples were not diagnosed with Alzheimer's disease.



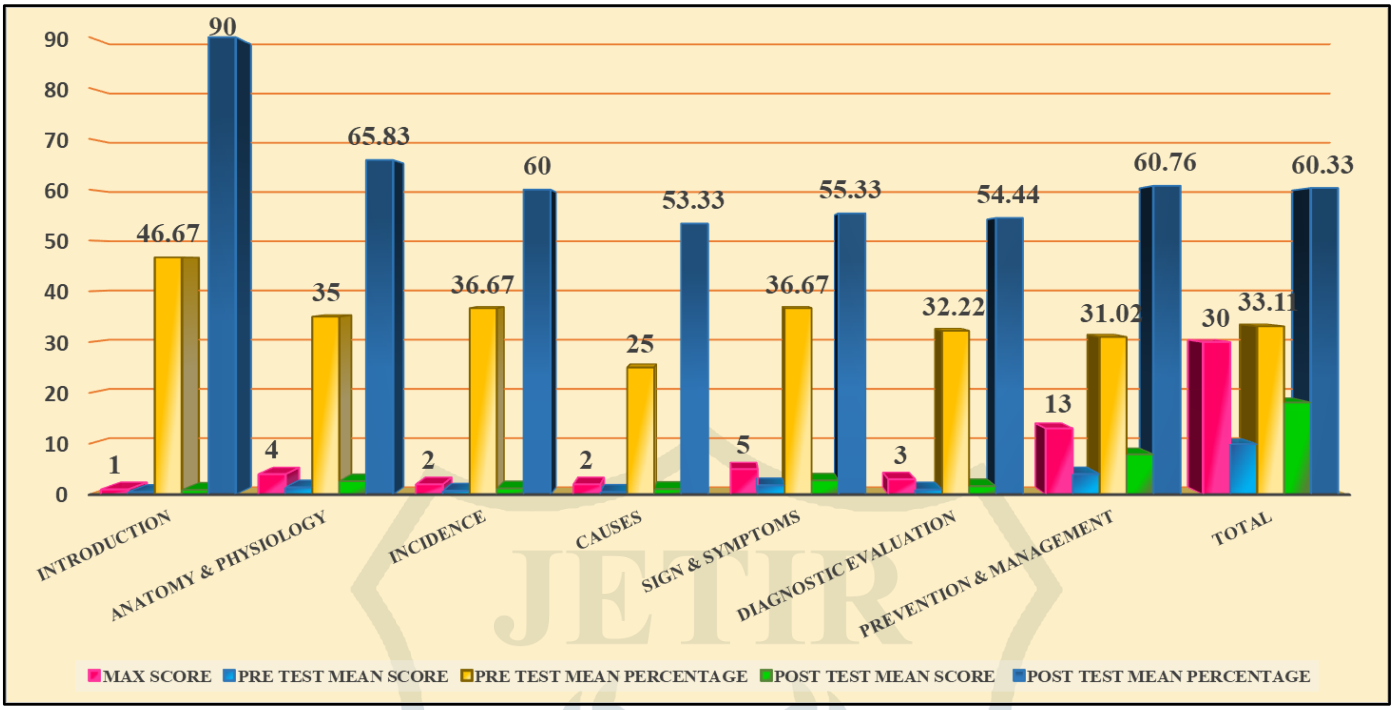
4.3.2 Analysis and interpretation of the data collected on structured knowledge questionnaire of the samples.

Table 4.2: - area wise mean, mean percentage, percentage gain, and mean difference of pre test and post-test knowledge score of samples on Alzheimer's disease.

Area of content	Max score	Pre-test		Post-test		Gain (%)	Mean Difference
		Mean score	Mean percentage (%)	Mean score	Mean percentage (%)		
Introduction	1	0.47	46.67%	0.9	90%	43.33	0.43
Anatomy & Physiology	4	1.4	35%	2.63	65.83%	30.83	1.23
Incidence	2	0.73	36.67%	1.2	60%	23.33	0.47
Causes	2	0.5	25%	1.07	53.33%	28.33	0.57
Sign & Symptoms	5	1.83	36.67%	2.77	55.33%	18.66	0.94
Diagnostic Evaluation	3	0.97	32.22%	1.63	54.44%	22.22	0.66
Prevention & Management	13	4.03	31.02%	7.9	60.76%	29.74	3.87
TOTAL	**30**	**9.93**	**33.11%**	**18.1**	**60.33%**	**27.22%**	**8.17**

Table 4.2. shows that the mean pre-test knowledge score of area related to Introduction was 0.47 (46.67%) and mean post-test knowledge score was 0.9 (90%) with mean difference of 0.43. The mean pre-test knowledge score of area related to Anatomy and Physiology was 1.4 (35%) and mean post-test knowledge was 2.63 (65.83%) with mean difference of 1.23. The mean pre-test knowledge score related to Incidence was 0.73 (36.67%) and mean post-test knowledge score was 1.2 (60%) with the mean difference of 0.47. The mean pre test knowledge score of area related to Causes was 0.5 (25%) and mean post test knowledge was 1.07 (53.33%) with mean difference of 0.57. The mean pre test knowledge score of area related to Sign & Symptoms was 1.83 (36.67%) and mean post test knowledge was 2.77 (55.33%) with mean difference of 0.94. The mean pre test knowledge score of area related to Diagnostic Evaluation was 0.97 (32.22%) and mean post test knowledge was 1.63 (54.44%) with mean difference of 0.66. The mean pre test knowledge score of area related to Prevention and Management was 4.03 (31.02%) and mean post test knowledge was 7.9 (60.76%) with mean difference of 3.87. From the above table it revealed that the percentage gain in area related

to Introduction was 43.33%., in area of Anatomy & Physiology the percentage gain was 30.83%, in the area of Incidence the percentage gain was 23.33%, in the area of Causes the percentage gain was 28.33%, in the area of Sign & Symptoms the percentage gain was 18.66%, in the area of Diagnostic evaluation the percentage gain was 22.22% and the area of Prevention and Management the percentage gain was 29.74%. So, it reflects that structured teaching programme was effective in term of improvement of knowledge among samples.



4.3.3 Assessment of knowledge scores before and after administration of structured teaching programme.

Table 4.3:- Frequency and percentage distribution of knowledge score before and after administration of structured teaching programme.

Score of knowledge	**Pre-Test**		**Post Test**	
	Frequency	Percent	Frequency	Percent
Poor (0-10)	14	46.47	2	6.7
Average (11-20)	16	53.33	22	73.3
Good (21-30)	0	0	6	20.0
Total	30	100.0	30	100.0

Table 4.3 shows that among 30 samples, Pre test knowledge score of elderly people regarding Alzheimer's disease was 14 (46.47%) had poor knowledge, 16 (53.33%) average knowledge and 0 (0%) had good knowledge. Post test knowledge score of elderly people was 2 (6.7%) had poor knowledge, 22 (73.3%) had average and 6 (20%) had good knowledge about Alzheimer's disease.

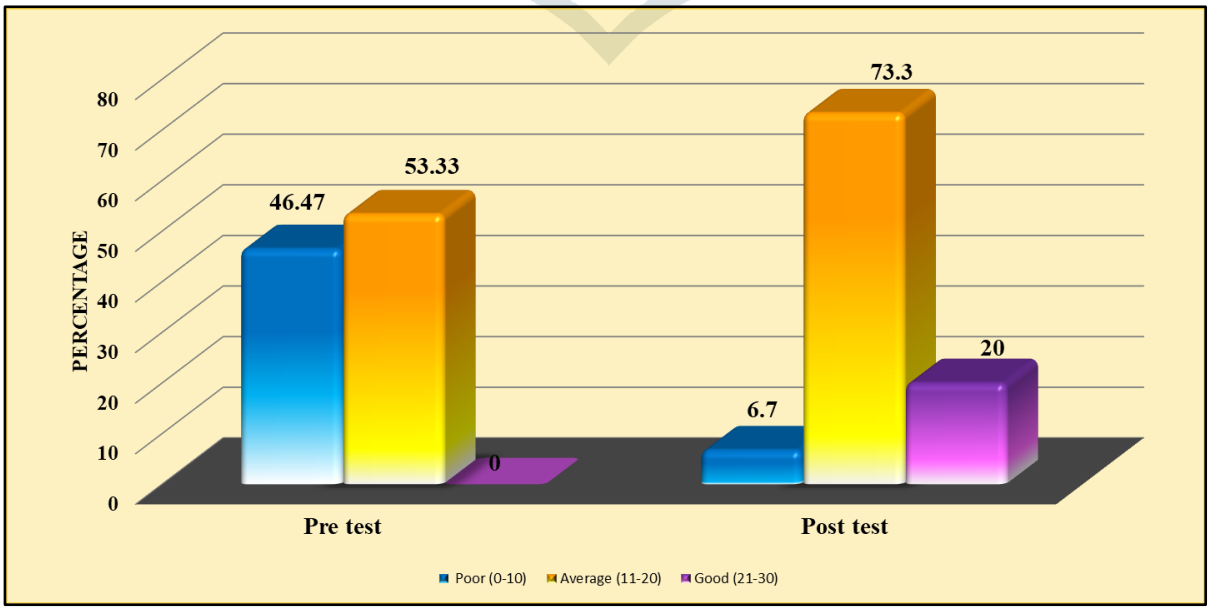
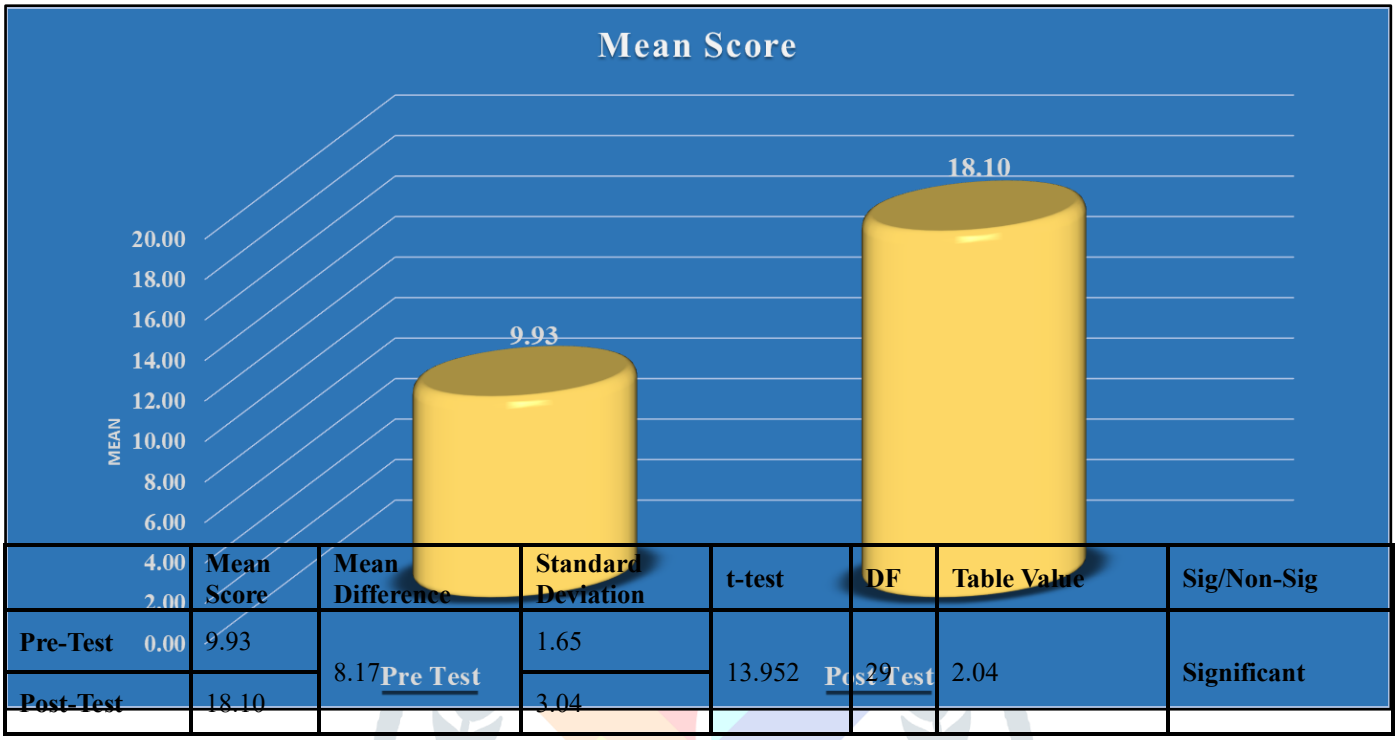


Table 4.4:-Mean, mean difference, standard deviation of pre and post test knowledge scores, paired t' test value of the pre-test post-test knowledge score of samples.

Table 4.4 shows pre -test and post test knowledge scores obtained by the elderly people on Alzheimer's disease. The mean pre test score was 9.93 and the mean post test score was 18.10. The mean difference between pre test and post test knowledge score was 8.17.

The table shows that the standard deviation of pre test score of knowledge was 1.65 and post test standard deviation was 3.04 The calculated 't value was 13.952 and table value was 2.04 at the 0.05 level of significance.

Above table revels that the mean post test knowledge score was significantly higher than mean pre test knowledge score. The calculated t value is greater than table value so null hypothesis H_0 was rejected and research hypothesis H_1 is accepted and it reveals that structured teaching programme was effective in gaining the knowledge among the samples.



	Mean Score	Mean Difference	Standard Deviation	t-test	DF	Table Value	Sig/Non-Sig
Pre-Test	9.93	8.17	1.65	13.952	29	2.04	**Significant**
Post-Test	18.10		3.04				

4.3.4:- Analysis and interpretation of the data related to association of the pre-test knowledge score with selected demographic variables of the samples.

Table 4.5:- Association of pre test knowledge score with selected demographic variables.

		Pre-Test		Total	Chi Square	DF	Table Value	Sig/Non-Sig
		Average	Poor					
AGE	65-70 Years	9	8	17	9.832	1	3.84	**Significant**
	71-75 Years	0	13	13				
GENDER	Male	5	8	13	0.782	1	3.84	Non-Sig
	Female	4	13	17				
RELIGION	Hindu	9	21	30	Can't Be computed			
EDUCATION LEVEL	Primary	3	10	13	8.667	3	7.81	**Significant**
	Secondary	8	2	10				
	Higher secondary	3	1	4				
	Grad.	2	1	3				
PREV. BELONG TO MED. /PARAMED. FIELD	Yes	0	2	2	0.918	1	3.84	Non-Sig
	No	9	19	28				

PREV. KNOWLEDGE REGARDING ALZHEIMER'S DISEASE	No	9	21	30	Can't Be computed			
ATTENDED ANY EDUC. PROG. REGARDING ALZHEIMER'S DISEASE	Yes	0	2	2	0.918	1	3.84	Non-Sig
	No	9	19	28				
ALREADY BEEN DIAGNOSED WITH ALZHEIMER'S DISEASE	No	9	21	30	Can't Be computed			

Table 4.5 shows the association of the demographic variable of sample with pre test knowledge score.

For age group with pretest knowledge score, the calculated value of chi square (9.832) was more than table value 3.84, the table value of chi square at the 1 degree of freedom and 0.05 level of significance. Therefore, age had significant association with the knowledge among samples.

For gender with pretest knowledge score, the calculated value of chi square (0.782) was less than table value 3.84, the table value of chi square at the 1 degree of freedom and 0.05 level of significance. Therefore, gender had not significant association with the knowledge among samples.

For educational level with pretest knowledge score, the calculated value of chi square (8.667) was more than table value 7.81, the table value of chi square at the 3 degree of freedom and 0.05 level of significance. Therefore, educational level had not significant association with the knowledge among samples. In our research study, the highest level of knowledge was found among people with secondary-level education.

For belonging to medical/ para-medical field with pretest knowledge score, the calculated value of chi square (0.918) was less than table value 3.84, the table value of chi square at the 1 degree of freedom and 0.05 level of significance. Therefore, belonging to medical/ para- medical field had not significant association with the knowledge among samples.

For attended any educational programme with pretest knowledge score, the calculated value of chi square (0.918) was, less than 3.84, the table value of chi square at the 1 degree of freedom and 0.05 level of significance. Therefore, attended any educational programme had not significant association with the knowledge among samples.

DISCUSSION:

The present study was conducted to assess the effectiveness of structured teaching program on knowledge regarding Alzheimer's disease among elderly residing at selected old age homes in Ahmedabad city. In order to achieve the objectives of the study, pre-experimental one group pre-test post-test research design was adopted. The data was collected from 30 elderly of selected old age homes by using structured knowledge questionnaire. The post test score was higher than the pre-test score and which was statistically proved and revealed that structured teaching program was effective in increasing the knowledge regarding Alzheimer's disease among the elderly.

CONCLUSION:

There was significant increase in the knowledge score of Alzheimer's disease among elderly after administration of the structured teaching programme. Hence it was concluded that structured teaching programme was effective in improving knowledge score of Alzheimer's disease among elderly residing at selected old age homes in Ahmedabad city.

Conflict of interest:

The authors declare that they have no competing interests.

Ethics declarations:

Ethics approval and consent to participate.

JG College of Nursing, Institute Ethics Committee reviewed this study and granted ethical approval. Consents has been obtained from participants.

Consent for publication:

Written consent for publication was obtained from each participant.

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